Unit 4 Shielding Effect Trend

Played on	**12 Nov 2019**
Hosted by	**JenKrug**
Played with	**25 players**
Played	**10 of 10**

Overall Performance

Total correct answers (%)	64,40%
Total incorrect answers (%)	35,60%
Average score (points)	7242,5

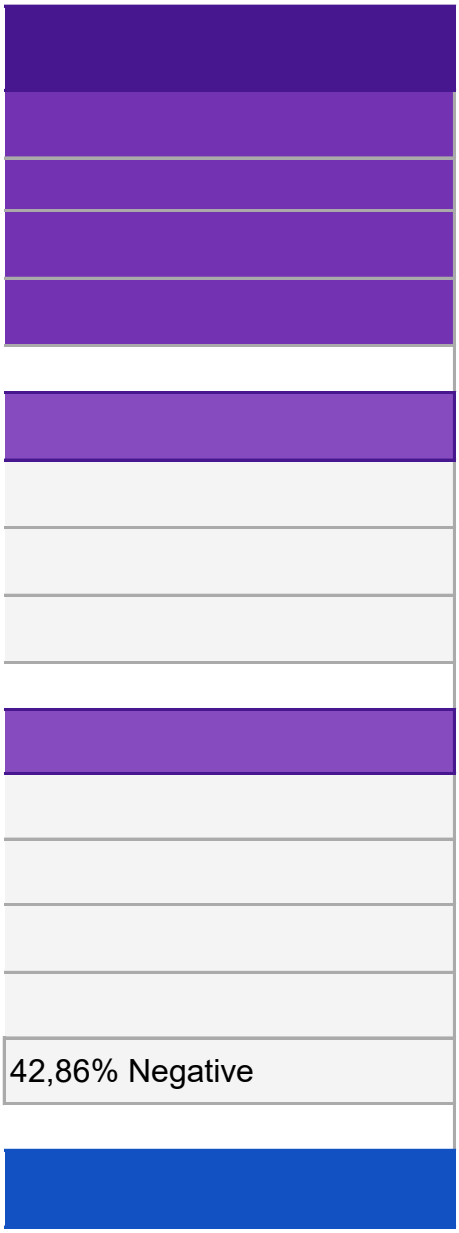
Feedback

Number of responses	7
How fun was it? (out of 5)	3,00 o
Did you learn something?	60,00%
Do you recommend it?	60,00%
How do you feel?	◉

Switch tabs/pages to view other result breakdown

%
%
52 points

ut of 5			
% Yes	40,00% No		
% Yes	40,00% No		
28,57% Positive	◉	28,57% Neutral	◉


42,86% Negative

Unit 4 Shielding Effect Trend

Final Scores

Rank	Players
1	Liam
2	Alec S
3	Sebastian :D
4	troy
5	Chelsea
6	Rhys
7	Katie
8	david
9	Michael
10	TheBoKiteEffect
11	mason
12	Mason's Beard
13	Lindsey
14	julia
15	Ashley
16	mckenna
17	Reece
18	Gina
19	Sydbey
20	Dahlia
21	jason
22	Max

Final Scores

23	mad
24	Owen
25	Macon

Final Scores

Total Score (points)	Correct Answers	Incorrect Answers
13413	10	0
13384	10	0
13375	10	0
13343	10	0
13273	10	0
12993	10	0
12989	10	0
11150	9	1
10915	9	1
8558	8	2
6177	7	3
6048	6	4
5511	6	4
5491	6	4
5322	6	4
4936	5	5
4782	6	4
4300	5	5
3196	4	6
2821	3	7
2723	3	7
2568	3	7

Final Scores

1581	2	8
1436	2	8
778	1	9

Unit 4 Shielding Effect Trend

Kahoot! Summary

Rank	Players
1	Liam
2	Alec S
3	Sebastian :D
4	troy
5	Chelsea
6	Rhys
7	Katie
8	david
9	Michael
10	TheBoKiteEffect
11	mason
12	Mason's Beard
13	Lindsey
14	julia
15	Ashley

16	mckenna
17	Reece
18	Gina
19	Sydbey
20	Dahlia
21	jason
22	Max
23	mad
24	Owen
25	Macon

Total Score (points)	Q1
13413	983
13384	989
13375	985
13343	983
13273	945
12993	881
12989	932
11150	0
10915	975
8558	0
6177	0
6048	0
5511	0
5491	0
5322	0

Kahoot! Summary

4936	0
4782	0
4300	0
3196	0
2821	968
2723	0
2568	0
1581	0
1436	848
778	0

What causes the shielding effect?	Q2
repulsion between core and valence electrons	1100
repulsion between core and valence electrons	1088
repulsion between core and valence electrons	1080
repulsion between core and valence electrons	1060
repulsion between core and valence electrons	1035
repulsion between core and valence electrons	1028
repulsion between core and valence electrons	995
attraction between valence electrons	530
repulsion between core and valence electrons	1060
attraction between valence electrons	948
attraction between nucleus and valence electrons	968
attraction between valence electrons	0
attraction between valence electrons	0
attraction between valence electrons	718
attraction between valence electrons	960

Kahoot! Summary

attraction between valence electrons	0
attraction between nucleus and valence electrons	755
attraction between valence electrons	0
attraction between valence electrons	765
repulsion between core and valence electrons	0
	0
attraction between nucleus and valence electrons	0
attraction between nucleus and valence electrons	753
repulsion between core and valence electrons	0
attraction between nucleus and valence electrons	778

The shielding effect increases across a period?	Q3
False	1180
False	1178
False	1170
False	1158
False	1175
False	1080
False	1118
False	805
False	0
False	0
False	653
True	0
True	0
False	0
False	643

Kahoot! Summary

True	0
False	0
True	0
False	0
	0
True	0
True	0
False	828
True	0
False	0

Which two elements have similar shielding effects?	Q4
N and F	1294
N and F	1300
N and F	1292
N and F	1300
N and F	1300
N and F	1266
N and F	1278
N and F	1195
Ca and C	990
	830
N and F	1038
	827
	824
	863
N and F	1069

Kahoot! Summary

	0
	808
	862
Na and K	688
	0
Na and K	0
Ca and C	0
N and F	0
Na and K	0
	0

How is effective nuclear charge calculated?	Q5
Zeff = atomic # − core electrons	1400
Zeff = atomic # − core electrons	1385
Zeff = atomic # − core electrons	1375
Zeff = atomic # − core electrons	1385
Zeff = atomic # − core electrons	1385
Zeff = atomic # − core electrons	1363
Zeff = atomic # − core electrons	1308
Zeff = atomic # − core electrons	1285
Zeff = atomic # − core electrons	1080
Zeff = atomic # − core electrons	630
Zeff = atomic # − core electrons	903
Zeff = atomic # − core electrons	0
Zeff = atomic # − core electrons	0
Zeff = atomic # − core electrons	0
Zeff = atomic # − core electrons	0

Kahoot! Summary

Zeff = total protons + core electrons	0
Zeff = atomic # − core electrons	773
Zeff = atomic # − core electrons	0
Zeff = atomic # − core electrons	0
	0
Zeff = total protons + core electrons	0
Zeff = total protons + total electrons	953
	0
Zeff = total protons + core electrons	0
	0

Which of the following trends increase with more shielding?	Q6
Atomic Radius	1500
Atomic Radius	1488
Atomic Radius	1500
Atomic Radius	1500
Metallic Properties	1500
Metallic Properties	1500
Metallic Properties	1488
Atomic Radius	1388
Metallic Properties	1188
Atomic Radius	1020
Atomic Radius	0
Ionization Energy	807
Electronegativity	612
Ionization Energy	0
	835

Kahoot! Summary

Electronegativity	657
Atomic Radius	0
Electronegativity	810
Ionization Energy	0
Ionization Energy	0
Electronegativity	0
Atomic Radius	982
	0
	588
	0

How does shielding effect chemical reactions?	Q7
less shielding helps nonmetals react quickly	1488
less shielding helps nonmetals react quickly	1488
less shielding helps nonmetals react quickly	1500
less shielding helps nonmetals react quickly	1487
less shielding helps nonmetals react quickly	1488
less shielding helps nonmetals react quickly	1483
less shielding helps nonmetals react quickly	1480
less shielding helps nonmetals react quickly	1465
less shielding helps nonmetals react quickly	1278
less shielding helps nonmetals react quickly	1187
more shielding helps nonmetals react quickly	0
less shielding helps nonmetals react quickly	963
less shielding helps nonmetals react quickly	865
	800
less shielding helps nonmetals react quickly	980

less shielding helps nonmetals react quickly	933
more shielding helps nonmetals react quickly	0
less shielding helps nonmetals react quickly	930
more shielding helps nonmetals react quickly	0
	953
more shielding helps nonmetals react quickly	0
less shielding helps nonmetals react quickly	0
	0
less shielding helps nonmetals react quickly	0
	0

The effective nuclear charge of a sodium ion (atomic #11) is	Q8
Zeff = 11 - 2 = +9	1490
Zeff = 11 - 2 = +9	1500
Zeff = 11 - 2 = +9	1490
Zeff = 11 - 2 = +9	1492
Zeff = 11 - 2 = +9	1492
Zeff = 11 - 2 = +9	1487
Zeff = 11 - 2 = +9	1487
Zeff = 11 - 2 = +9	1492
Zeff = 11 - 2 = +9	1387
Zeff = 11 - 2 = +9	1268
Zeff = 11 - 1 = +10	877
Zeff = 11 - 2 = +9	1060
Zeff = 11 - 2 = +9	977
Zeff = 11 - 2 = +9	935
Zeff = 11 - 2 = +9	835

Kahoot! Summary

Zeff = 11 - 2 = +9	1008
Zeff = 11 - 1 = +10	685
Zeff = 11 - 2 = +9	898
Zeff = 11 - 10 = +1	0
Zeff = 11 - 2 = +9	0
Zeff = 11 - 8 = +3	712
Zeff = 11 - 10 = +1	0
Zeff = 11 - 10 = +1	0
Zeff = 11 - 8 = +3	0
	0

When comparing the shielding effect for magnesium and oxygen	Q9
Mg has more shielding	1488
Mg has more shielding	1478
Mg has more shielding	1483
Mg has more shielding	1488
Mg has more shielding	1463
Mg has more shielding	1455
Mg has more shielding	1443
Mg has more shielding	1500
Mg has more shielding	1470
Mg has more shielding	1308
Mg has more shielding	985
Mg has more shielding	1128
Mg has more shielding	920
Mg has more shielding	1005
Mg has more shielding	0

Kahoot! Summary

Mg has more shielding	1088
Mg has more shielding	858
Mg has more shielding	0
Mg and O have the same shielding	798
	0
Mg has more shielding	863
Mg has less shielding	633
	0
Mg and O have the same shielding	0
	0

Which period (row) has the greatest shielding effect?	Q10
Period 7	1490
Period 7	1490
Period 7	1500
Period 7	1490
Period 7	1490
Period 7	1450
Period 7	1460
Period 7	1490
Period 7	1487
Period 7	1367
Period 7	753
Period 7	1263
Period 7	1313
Period 7	1170
Period 1	0

Kahoot! Summary

Period 7	1250
Period 7	903
Period 1	800
Period 7	945
	900
Period 7	1148
Period 7	0
	0
Period 3	0
	0

Which ion has the least shielding effect?
H +1
H +1
H +1
H +1
H +1
H +1
H +1
H +1
H +1
H +1
H +1
H +1
H +1
H +1
N −3

H +1
H +1
H +1
H +1
H +1
H +1
F −1

Unit 4 Shi

1 Quiz

Correct answers
Players correct (
Question duratic

Answer Sun

Answer options
Is answer correc
Number of answ
Average time tal

Answer Det

Players
Alec S
Ashley
Chelsea
Dahlia
Gina
Katie
Liam
Lindsey
Macon
Mason's Beard

Max
Michael
Owen
Reece
Rhys
Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason
mckenna
troy

ielding Effect Trend

What causes the shielding effect?

s	repulsior
(%)	40,00%
on	60 secor

mmary

	▲
ct?	
vers received	
ken to answer (seconds)	

ails

	Answer
	☑
	✗
	☑
	☑
	✗
	☑
	☑
	✗
	✗
	✗

	✗
	☑
	☑
	✗
	☑
	☑
	✗
t	✗
	✗
	✗
	✗
	✗
	✗
	✗
	☑

n between core and valence electrons
nds

repulsion between valence electrons	♦
✗	
0	
0,00	

	Score (p
repulsion between core and valence electrons	989
attraction between valence electrons	0
repulsion between core and valence electrons	945
repulsion between core and valence electrons	968
attraction between valence electrons	0
repulsion between core and valence electrons	932
repulsion between core and valence electrons	983
attraction between valence electrons	0
attraction between nucleus and valence electrons	0
attraction between valence electrons	0

attraction between nucleus and valence electrons	0
repulsion between core and valence electrons	975
repulsion between core and valence electrons	848
attraction between nucleus and valence electrons	0
repulsion between core and valence electrons	881
repulsion between core and valence electrons	985
attraction between valence electrons	0
attraction between valence electrons	0
attraction between valence electrons	0
	0
attraction between valence electrons	0
attraction between nucleus and valence electrons	0
attraction between nucleus and valence electrons	0
attraction between valence electrons	0
repulsion between core and valence electrons	983

repulsion between core and valence electrons	●
✓	
10	
6,14	

oints)	Current
	989
	0
	945
	968
	0
	932
	983
	0
	0
	0

	0
	975
	848
	0
	881
	985
	0
	0
	0
	0
	0
	0
	0
	0
	983

attraction between valence electrons	■
✗	
9	
16,89	

Total Score (points)	Answer ti
	1,3
	16,8
	6,6
	3,9
	6
	8,2
	2
	13,6
	24,2
	20

	10,1
	3
	18,2
	29
	14,3
	1,8
	23
	20,6
	14,7
	0
	21,4
	26,9
	16,9
	15,9
	2,1

attraction between nucleus and valence electrons

✗

5

21,42

me (seconds)

Unit 4 Shi
2 Quiz
Correct answers
Players correct (
Question duratic
Answer Sun
Answer options
Is answer correc
Number of answ
Average time tal
Answer Deta
Players
Alec S
Ashley
Chelsea
Dahlia
Gina
Katie
Liam
Lindsey
Macon
Mason's Beard

Max
Michael
Owen
Reece
Rhys
Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason
mckenna
troy

ielding Effect Trend

The shielding effect increases across a period?

s	False
(%)	68,00%
on	20 secor

mmary

	▲
ct?	
vers received	
ken to answer (seconds)	

ails

	Answer
	✓
	✓
	✓
	✗
	✗
	✓
	✓
	✗
	✓
	✗

	✗
	☑
	✗
	☑
	☑
	☑
	☑
t	☑
	☑
	✗
	☑
	☑
	☑
	✗
	☑

nds

False	♦
☑	
17	
5,15	

	Score (p
False	1088
False	960
False	1035
	0
True	0
False	995
False	1100
True	0
False	778
True	0

True	0
False	1060
True	0
False	755
False	1028
False	1080
False	765
False	948
False	530
True	0
False	718
False	753
False	968
True	0
False	1060

True	●
✗	
7	
5,94	

oints)	Current
	2077
	960
	1980
	968
	0
	1927
	2083
	0
	778
	0

	0
	2035
	848
	755
	1909
	2065
	765
	948
	530
	0
	718
	753
	968
	0
	2043

Total Score (points)	Answer ti
	0,5
	1,6
	2,6
	20
	13,5
	4,2
	0,3
	4,8
	8,9
	2,3

	1,6
	1,6
	14
	9,8
	2,9
	0,8
	9,4
	2,1
	18,8
	2,5
	11,3
	9,9
	1,3
	2,9
	1,6

ime (seconds)

Unit 4 Shi

3 Quiz

Correct answers
Players correct (
Question duratic

Answer Sun

Answer options
Is answer correc
Number of answ
Average time tal

Answer Det

Players
Alec S
Ashley
Chelsea
Dahlia
Gina
Katie
Liam
Lindsey
Macon
Mason's Beard

Max
Michael
Owen
Reece
Rhys
Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason
mckenna
troy

ielding Effect Trend

Which two elements have similar shielding effects?

s	N and F
(%)	44,00%
on	20 secor

mmary

	▲
ct?	
vers received	
ken to answer (seconds)	

ails

	Answer
	☑
	☑
	☑
	✗
	✗
	☑
	☑
	✗
	✗
	✗

	✗
	✗
	✗
	✗
	☑
	☑
	✗
t	✗
	☑
	✗
	✗
	☑
	☑
	✗
	☑

nds

Na and K	♦
✗	
3	
14,87	

	Score (p
N and F	1178
N and F	643
N and F	1175
	0
	0
N and F	1118
N and F	1180
	0
	0
	0

Ca and C	0
Ca and C	0
Na and K	0
	0
N and F	1080
N and F	1170
Na and K	0
	0
N and F	805
Na and K	0
	0
N and F	828
N and F	653
	0
N and F	1158

Ne and Ar	●
✗	
0	
0,00	

oints)	Current
	3255
	1603
	3155
	968
	0
	3045
	3263
	0
	778
	0

	0
	2035
	848
	755
	2989
	3235
	765
	948
	1335
	0
	718
	1581
	1621
	0
	3201

Ca and C	■
✗	
2	
3,90	

Total Score (points)	Answer ti
	0,9
	18,3
	1
	20
	20
	3,3
	0,8
	20
	20
	20

	7,1
	0,7
	14,1
	20
	4,8
	1,2
	19,3
	20
	11,8
	11,2
	20
	10,9
	17,9
	20
	1,7

N and F
✓
11
6,60
ime (seconds)

Unit 4 Shi
4 Quiz
Correct answers
Players correct (
Question duratic
Answer Sun
Answer options
Is answer correc
Number of answ
Average time tal
Answer Deta
Players
Alec S
Ashley
Chelsea
Dahlia
Gina
Katie
Liam
Lindsey
Macon
Mason's Beard

Max
Michael
Owen
Reece
Rhys
Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason
mckenna
troy

ielding Effect Trend

How is effective nuclear charge calculated?

s	Zeff = at
(%)	72,00%
on	60 secor

mmary

	▲
ct?	
vers received	
ken to answer (seconds)	

ails

	Answer
	✓
	✓
	✓
	✗
	✓
	✓
	✓
	✓
	✗
	✓

	✗
	☑
	✗
	☑
	☑
	☑
	☑
t	☑
	☑
	✗
	☑
	✗
	☑
	✗
	☑

omic # − core electrons
nds

Zeff = atomic # − valence electrons	♦
✗	
0	
0,00	

	Score (p
Zeff = atomic # − core electrons	1300
Zeff = atomic # − core electrons	1069
Zeff = atomic # − core electrons	1300
	0
Zeff = atomic # − core electrons	862
Zeff = atomic # − core electrons	1278
Zeff = atomic # − core electrons	1294
Zeff = atomic # − core electrons	824
	0
Zeff = atomic # − core electrons	827

Zeff = total protons + total electrons	0
Zeff = atomic # − core electrons	990
Zeff = total protons + core electrons	0
Zeff = atomic # − core electrons	808
Zeff = atomic # − core electrons	1266
Zeff = atomic # − core electrons	1292
Zeff = atomic # − core electrons	688
Zeff = atomic # − core electrons	830
Zeff = atomic # − core electrons	1195
Zeff = total protons + core electrons	0
Zeff = atomic # − core electrons	863
	0
Zeff = atomic # − core electrons	1038
Zeff = total protons + core electrons	0
Zeff = atomic # − core electrons	1300

Zeff = total protons + total electrons	●
✗	
1	
2,80	

oints)	Current
	4555
	2672
	4455
	968
	862
	4323
	4557
	824
	778
	827

	0
	3025
	848
	1563
	4255
	4527
	1453
	1778
	2530
	0
	1581
	1581
	2659
	0
	4501

Zeff = atomic # − core electrons	■
✓	
18	
11,24	

Total Score (points)	Answer ti
	0,2
	15,7
	0,4
	60
	16,6
	2,7
	0,7
	21,1
	60
	20,8

	2,8
	1,2
	17,8
	23
	4,1
	1
	37,4
	20,4
	0,6
	18,3
	16,5
	60
	19,5
	31,3
	0,4

Zeff = total protons + core electrons
✗
3
22,47
ime (seconds)

Unit 4 Shi

5 Quiz

Correct answers
Players correct (
Question duratic

Answer Sun

Answer options
Is answer correc
Number of answ
Average time tal

Answer Det

Players
Alec S
Ashley
Chelsea
Dahlia
Gina
Katie
Liam
Lindsey
Macon
Mason's Beard

Max
Michael
Owen
Reece
Rhys
Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason
mckenna
troy

ielding Effect Trend

Which of the following trends increase with more shielding?

s	Atomic F
(%)	52,00%
on	20 secor

mmary

	▲
ct?	
vers received	
ken to answer (seconds)	

ails

	Answer
	☑
	✗
	☑
	✗
	✗
	☑
	☑
	✗
	✗
	✗

	√
	√
	✗
	√
	√
	√
	✗
t	√
	√
	✗
	✗
	✗
	√
	✗
	√

Radius, Metallic Properties
nds

Atomic Radius	♦
✓	
9	
5,88	

	Score (p
Atomic Radius	1385
	0
Metallic Properties	1385
Ionization Energy	0
Electronegativity	0
Metallic Properties	1308
Atomic Radius	1400
Electronegativity	0
	0
Ionization Energy	0

Atomic Radius	953
Metallic Properties	1080
	0
Atomic Radius	773
Metallic Properties	1363
Atomic Radius	1375
Ionization Energy	0
Atomic Radius	630
Atomic Radius	1285
Electronegativity	0
Ionization Energy	0
	0
Atomic Radius	903
Electronegativity	0
Atomic Radius	1385

Ionization Energy	●
✗	
4	
18,25	

oints)	Current
	5940
	2672
	5840
	968
	862
	5631
	5957
	824
	778
	827

	953
	4105
	848
	2336
	5618
	5902
	1453
	2408
	3815
	0
	1581
	1581
	3562
	0
	5886

Electronegativity	■
✗	
4	
12,33	

Total Score (points)	Answer ti
	0,6
	20
	0,6
	19,1
	13,3
	3,7
	0,4
	10,5
	20
	18,2

	1,9
	0,8
	20
	13,1
	1,5
	1
	18,7
	18,8
	0,6
	10,1
	17
	20
	15,9
	15,4
	0,6

Metallic Properties
☑
4
1,65
ime (seconds)

Unit 4 Shi
6 Quiz
Correct answers
Players correct (
Question duratic
Answer Sun
Answer options
Is answer correc
Number of answ
Average time tal
Answer Deta
Players
Alec S
Ashley
Chelsea
Dahlia
Gina
Katie
Liam
Lindsey
Macon
Mason's Beard

Max
Michael
Owen
Reece
Rhys
Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason
mckenna
troy

ielding Effect Trend

How does shielding effect chemical reactions?

s	less&nbs
(%)	68,00%
on	30 secor

mmary

	▲
ct?	
wers received	
ken to answer (seconds)	

ails

	Answer
	☑
	☑
	☑
	✗
	☑
	☑
	☑
	☑
	✗
	☑

	√
	√
	√
	✗
	√
	√
	✗
t	√
	√
	✗
	✗
	✗
	✗
	√
	√

sp;shielding helps nonmetals react quickly
nds

less shielding helps metals react quickly	♦
✗	
0	
0,00	

	Score (p
less shielding helps nonmetals react quickly	1488
less shielding helps nonmetals react quickly	835
less shielding helps nonmetals react quickly	1500
	0
less shielding helps nonmetals react quickly	810
less shielding helps nonmetals react quickly	1488
less shielding helps nonmetals react quickly	1500
less shielding helps nonmetals react quickly	612
	0
less shielding helps nonmetals react quickly	807

less shielding helps nonmetals react quickly	982
less shielding helps nonmetals react quickly	1188
less shielding helps nonmetals react quickly	588
more shielding helps nonmetals react quickly	0
less shielding helps nonmetals react quickly	1500
less shielding helps nonmetals react quickly	1500
more shielding helps nonmetals react quickly	0
less shielding helps nonmetals react quickly	1020
less shielding helps nonmetals react quickly	1388
more shielding helps nonmetals react quickly	0
	0
	0
more shielding helps nonmetals react quickly	0
less shielding helps nonmetals react quickly	657
less shielding helps nonmetals react quickly	1500

less shielding helps nonmetals react quickly	
✓	
17	
7,29	

oints)	Current
	7428
	3507
	7340
	968
	1672
	7119
	7457
	1436
	778
	1634

	1935
	5293
	1436
	2336
	7118
	7402
	1453
	3428
	5203
	0
	1581
	1581
	3562
	657
	7386

more shielding helps nonmetals react quickly	■
✗	
4	
20,65	

Total Score (points)	Answer ti
	0,7
	9,9
	0,4
	30
	11,4
	0,7
	0,4
	23,3
	30
	11,6

	7,1
	0,7
	24,7
	19,6
	0,2
	0,4
	24,9
	10,8
	0,7
	13,8
	30
	30
	24,3
	20,6
	0,4

shielding has no effect on reactivity
✗
0
0,00
me (seconds)

Unit 4 Shi
7 Quiz
Correct answers
Players correct (
Question duratic
Answer Sun
Answer options
Is answer correc
Number of answ
Average time tal
Answer Deta
Players
Alec S
Ashley
Chelsea
Dahlia
Gina
Katie
Liam
Lindsey
Macon
Mason's Beard

Max
Michael
Owen
Reece
Rhys
Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason
mckenna
troy

ielding Effect Trend

The effective nuclear charge of a sodium ion (atomic #11) is

s	Zeff = 11
(%)	68,00%
on	30 secor

mmary

	▲
ct?	
vers received	
ken to answer (seconds)	

ails

	Answer
	☑
	☑
	☑
	☑
	☑
	☑
	☑
	☑
	✗
	☑

	✗
	☑
	✗
	✗
	☑
	☑
	✗
t	☑
	☑
	✗
	☑
	✗
	✗
	☑
	☑

- 2 = +9
nds

Zeff = 11 - 2 = +9	♦
☑	
17	
4,72	

	Score (p
Zeff = 11 - 2 = +9	1488
Zeff = 11 - 2 = +9	980
Zeff = 11 - 2 = +9	1488
Zeff = 11 - 2 = +9	953
Zeff = 11 - 2 = +9	930
Zeff = 11 - 2 = +9	1480
Zeff = 11 - 2 = +9	1488
Zeff = 11 - 2 = +9	865
	0
Zeff = 11 - 2 = +9	963

Zeff = 11 - 10 = +1	0
Zeff = 11 - 2 = +9	1278
Zeff = 11 - 8 = +3	0
Zeff = 11 - 1 = +10	0
Zeff = 11 - 2 = +9	1483
Zeff = 11 - 2 = +9	1500
Zeff = 11 - 10 = +1	0
Zeff = 11 - 2 = +9	1187
Zeff = 11 - 2 = +9	1465
Zeff = 11 - 8 = +3	0
Zeff = 11 - 2 = +9	800
Zeff = 11 - 10 = +1	0
Zeff = 11 - 1 = +10	0
Zeff = 11 - 2 = +9	933
Zeff = 11 - 2 = +9	1487

Zeff = 11 - 8 = +3	●
✗	
2	
7,40	

oints)	Current
	8916
	4487
	8828
	1921
	2602
	8599
	8945
	2301
	778
	2597

	1935
	6571
	1436
	2336
	8601
	8902
	1453
	4615
	6668
	0
	2381
	1581
	3562
	1590
	8873

Zeff = 11 - 10 = +1	■
✗	
3	
12,13	

Total Score (points)	Answer ti
	0,7
	7,2
	0,7
	2,8
	10,2
	1,2
	0,7
	14,1
	30
	8,2

	9,6
	1,3
	2
	13,5
	1
	0,4
	25,1
	6,8
	2,1
	12,8
	12
	1,7
	11,5
	10
	0,8

Zeff = 11 - 1 = +10

✗

2

12,50

ime (seconds)

Unit 4 Shi
8 Quiz
Correct answers
Players correct (
Question duratic
Answer Sun
Answer options
Is answer correc
Number of answ
Average time tal
Answer Deta
Players
Alec S
Ashley
Chelsea
Dahlia
Gina
Katie
Liam
Lindsey
Macon
Mason's Beard

Max
Michael
Owen
Reece
Rhys
Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason
mckenna
troy

ielding Effect Trend

When comparing the shielding effect for magnesium and o

s	Mg has&
(%)	76,00%
on	30 secor

mmary

	▲
ct?	
vers received	
ken to answer (seconds)	

ails

	Answer
	✓
	✓
	✓
	✗
	✓
	✓
	✓
	✓
	✗
	✓

	✗
	☑
	✗
	☑
	☑
	☑
	✗
t	☑
	☑
	☑
	☑
	✗
	☑
	☑
	☑

xygen
‹nbsp;more shielding
ıds

Mg has less shielding	♦
✗	
1	
3,30	

	Score (p
Mg has more shielding	1500
Mg has more shielding	835
Mg has more shielding	1492
	0
Mg has more shielding	898
Mg has more shielding	1487
Mg has more shielding	1490
Mg has more shielding	977
	0
Mg has more shielding	1060

Mg has less shielding	0
Mg has more shielding	1387
Mg and O have the same shielding	0
Mg has more shielding	685
Mg has more shielding	1487
Mg has more shielding	1490
Mg and O have the same shielding	0
Mg has more shielding	1268
Mg has more shielding	1492
Mg has more shielding	712
Mg has more shielding	935
	0
Mg has more shielding	877
Mg has more shielding	1008
Mg has more shielding	1492

Mg and O have the same shielding	●
✗	
2	
13,15	

oints)	Current
	10416
	5322
	10320
	1921
	3500
	10086
	10435
	3278
	778
	3657

	1935
	7958
	1436
	3021
	10088
	10392
	1453
	5883
	8160
	712
	3316
	1581
	4439
	2598
	10365

Mg has more shielding	■
✓	
19	
7,37	

Total Score (points)	Answer ti
	0,2
	21,9
	0,5
	30
	18,1
	0,8
	0,6
	13,4
	30
	8,4

	3,3
	0,8
	12,3
	18,9
	0,8
	0,6
	14
	7,9
	0,5
	17,3
	9,9
	30
	7,4
	11,5
	0,5

O has more shielding
✗
0
0,00
ime (seconds)

Unit 4 Shi

9 Quiz

Correct answers
Players correct (
Question duratic

Answer Sun

Answer options
Is answer correc
Number of answ
Average time tal

Answer Det

Players
Alec S
Ashley
Chelsea
Dahlia
Gina
Katie
Liam
Lindsey
Macon
Mason's Beard

Max
Michael
Owen
Reece
Rhys
Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason
mckenna
troy

ielding Effect Trend

Which period (row) has the greatest shielding effect?	
s	Period 7
(%)	76,00%
on	20 secor

nmary

	▲
ct?	
vers received	
ken to answer (seconds)	

ails

	Answer
	☑
	✗
	☑
	✗
	✗
	☑
	☑
	☑
	✗
	☑

	√
	√
	✗
	√
	√
	√
	√
t	√
	√
	√
	√
	✗
	√
	√
	√

nds

Period 1	♦
✗	
2	
6,85	

	Score (p
Period 7	1478
Period 1	0
Period 7	1463
	0
Period 1	0
Period 7	1443
Period 7	1488
Period 7	920
	0
Period 7	1128

Period 7	633
Period 7	1470
Period 3	0
Period 7	858
Period 7	1455
Period 7	1483
Period 7	798
Period 7	1308
Period 7	1500
Period 7	863
Period 7	1005
	0
Period 7	985
Period 7	1088
Period 7	1488

Period 3	●
✗	
1	
6,20	

oints)	Current
	11894
	5322
	11783
	1921
	3500
	11529
	11923
	4198
	778
	4785

	2568
	9428
	1436
	3879
	11543
	11875
	2251
	7191
	9660
	1575
	4321
	1581
	5424
	3686
	11853

Period 5	■
✗	
0	
0,00	

Total Score (points)	Answer ti
	0,9
	2
	1,5
	20
	11,7
	2,3
	0,5
	15,2
	20
	6,9

	14,7
	1,2
	6,2
	9,7
	1,8
	0,7
	8,1
	7,7
	0,2
	9,5
	7,8
	20
	4,6
	8,5
	0,5

Period 7
☑
19
5,38
ime (seconds)

Unit 4 Shi
10 Quiz
Correct answers
Players correct (
Question duratic
Answer Sun
Answer options
Is answer correc
Number of answ
Average time tal
Answer Det
Players
Alec S
Ashley
Chelsea
Dahlia
Gina
Katie
Liam
Lindsey
Macon
Mason's Beard

Max
Michael
Owen
Reece
Rhys
Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason
mckenna
troy

ielding Effect Trend

Which ion has the least shielding effect?

s	H +1
(%)	80,00%
on	30 secor

mmary

	▲
ct?	
vers received	
ken to answer (seconds)	

ails

	Answer
	☑
	✗
	☑
	☑
	☑
	☑
	☑
	☑
	✗
	☑

	✗
	☑
	✗
	☑
	☑
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	☑
t	☑
	☑
	☑
	☑
	✗
	☑
	☑
	☑

nds

F −1	♦
✗	
1	
6,20	

	Score (p
H +1	1490
N −3	0
H +1	1490
H +1	900
H +1	800
H +1	1460
H +1	1490
H +1	1313
	0
H +1	1263

F −1	0
H +1	1487
	0
H +1	903
H +1	1450
H +1	1500
H +1	945
H +1	1367
H +1	1490
H +1	1148
H +1	1170
	0
H +1	753
H +1	1250
H +1	1490

H +1	
20	
6,14	

oints)	Current
	13384
	5322
	13273
	2821
	4300
	12989
	13413
	5511
	778
	6048

	2568
	10915
	1436
	4782
	12993
	13375
	3196
	8558
	11150
	2723
	5491
	1581
	6177
	4936
	13343

Mg +2	■
✗	
0	
0,00	

Total Score (points)	Answer ti
	0,6
	12,7
	0,6
	6
	12
	2,4
	0,6
	5,2
	30
	8,2

	6,2
	0,8
	30
	17,8
	3
	0,3
	9,3
	8
	0,6
	3,1
	7,8
	30
	26,8
	9
	0,6

N −3
✗
1
12,70
ime (seconds)

Question Number
1 Quiz
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Question
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
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What causes the shielding effect?
What causes the shielding effect?

What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
What causes the shielding effect?
The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?

The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?
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The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?

The shielding effect increases across a period?
The shielding effect increases across a period?
The shielding effect increases across a period?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
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Which two elements have similar shielding effects?
Which two elements have similar shielding effects?

Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
Which two elements have similar shielding effects?
How is effective nuclear charge calculated?
How is effective nuclear charge calculated?
How is effective nuclear charge calculated?
How is effective nuclear charge calculated?

How is effective nuclear charge calculated?
How is effective nuclear charge calculated?
How is effective nuclear charge calculated?
How is effective nuclear charge calculated?
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How is effective nuclear charge calculated?
How is effective nuclear charge calculated?
How is effective nuclear charge calculated?
How is effective nuclear charge calculated?

How is effective nuclear charge calculated?
How is effective nuclear charge calculated?
How is effective nuclear charge calculated?
How is effective nuclear charge calculated?
How is effective nuclear charge calculated?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?

Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
Which of the following trends increase with more shielding?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?

How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
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How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?

How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
How does shielding effect chemical reactions?
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
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The effective nuclear charge of a sodium ion (atomic #11) is

The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
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The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is
The effective nuclear charge of a sodium ion (atomic #11) is

When comparing the shielding effect for magnesium and oxygen
When comparing the shielding effect for magnesium and oxygen
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When comparing the shielding effect for magnesium and oxygen
Which period (row) has the greatest shielding effect?
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Which period (row) has the greatest shielding effect?
Which period (row) has the greatest shielding effect?
Which ion has the least shielding effect?
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Which ion has the least shielding effect?
Which ion has the least shielding effect?
Which ion has the least shielding effect?

Answer 1	Answer 2
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons

repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
repulsion between valence electrons	repulsion between core and valence electrons
False	True
False	True
False	True
False	True
False	True
False	True

False	True
False	True
False	True
False	True
False	True
False	True
False	True
False	True
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False	True
False	True
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False	True
False	True
False	True
False	True
False	True

False	True
False	True
False	True
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar

Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Na and K	Ne and Ar
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons

Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons

Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Zeff = atomic # − valence electrons	Zeff = total protons + total electrons
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy

Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
Atomic Radius	Ionization Energy
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly

less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly

less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
less shielding helps metals react quickly	less shielding helps nonmetals react quickly
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3

Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3
Zeff = 11 - 2 = +9	Zeff = 11 - 8 = +3

Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding

Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Mg has less shielding	Mg and O have the same shielding
Period 1	Period 3
Period 1	Period 3
Period 1	Period 3
Period 1	Period 3
Period 1	Period 3
Period 1	Period 3
Period 1	Period 3

Period 1	Period 3
Period 1	Period 3
Period 1	Period 3
Period 1	Period 3
Period 1	Period 3
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Period 1	Period 3
Period 1	Period 3
Period 1	Period 3
Period 1	Period 3
Period 1	Period 3
Period 1	Period 3
Period 1	Period 3

Period 1	Period 3
Period 1	Period 3
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1

F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1
F −1	H +1

Answer 3	Answer 4
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons

attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons
attraction between valence electrons	attraction between nucleus and valence electrons

Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F

Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Ca and C	N and F
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons

Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons

Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Zeff = atomic # − core electrons	Zeff = total protons + core electrons
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties

Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
Electronegativity	Metallic Properties
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity

more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
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more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
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more shielding helps nonmetals react quickly	shielding has no effect on reactivity

more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
more shielding helps nonmetals react quickly	shielding has no effect on reactivity
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10

Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10
Zeff = 11 - 10 = +1	Zeff = 11 - 1 = +10

Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding

Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Mg has more shielding	O has more shielding
Period 5	Period 7
Period 5	Period 7
Period 5	Period 7
Period 5	Period 7
Period 5	Period 7
Period 5	Period 7
Period 5	Period 7

Period 5	Period 7
Period 5	Period 7
Period 5	Period 7
Period 5	Period 7
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Period 5	Period 7
Period 5	Period 7
Period 5	Period 7
Period 5	Period 7
Period 5	Period 7
Period 5	Period 7
Period 5	Period 7
Period 5	Period 7
Period 5	Period 7

Period 5	Period 7
Period 5	Period 7
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3

Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3
Mg +2	N −3

Correct Answers	Time Allotted to Answer (seconds)
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60

repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
repulsion between core and valence electrons	60
False	20
False	20
False	20
False	20
False	20
False	20

False	20
False	20
False	20
False	20
False	20
False	20
False	20
False	20
False	20
False	20
False	20
False	20
False	20
False	20
False	20
False	20
False	20
False	20

False	20
False	20
False	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20

N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
N and F	20
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60

Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60

Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Zeff = atomic # − core electrons	60
Atomic Radius, Metallic Properties	20
Atomic Radius, Metallic Properties	20
Atomic Radius, Metallic Properties	20
Atomic Radius, Metallic Properties	20
Atomic Radius, Metallic Properties	20
Atomic Radius, Metallic Properties	20
Atomic Radius, Metallic Properties	20
Atomic Radius, Metallic Properties	20
Atomic Radius, Metallic Properties	20
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Atomic Radius, Metallic Properties	20
Atomic Radius, Metallic Properties	20
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Atomic Radius, Metallic Properties	20
less shielding helps nonmetals react quickly	30
less shielding helps nonmetals react quickly	30

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Zeff = 11 - 2 = +9	30
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Mg has more shielding	30
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Period 7	20
Period 7	20
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Period 7	20
H +1	30
H +1	30
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H +1	30

Players
Alec S
Ashley
Chelsea
Dahlia
Gina
Katie
Liam
Lindsey
Macon
Mason's Beard
Max
Michael
Owen
Reece
Rhys

Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason
mckenna
troy
Alec S
Ashley
Chelsea
Dahlia
Gina
Katie

Liam
Lindsey
Macon
Mason's Beard
Max
Michael
Owen
Reece
Rhys
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Rhys
Sebastian :D
Sydbey
TheBoKiteEffect

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troy

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Liam

Lindsey
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Mason's Beard
Max
Michael
Owen
Reece
Rhys
Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason

mckenna
troy
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Chelsea
Dahlia
Gina
Katie
Liam
Lindsey
Macon
Mason's Beard
Max
Michael
Owen
Reece

Rhys
Sebastian :D
Sydbey
TheBoKiteEffect
david
jason
julia
mad
mason
mckenna
troy

Answer	Correct / Incorrect	Correct
repulsion between core and valence electrons	Correct	1
attraction between valence electrons	Incorrect	0
repulsion between core and valence electrons	Correct	1
repulsion between core and valence electrons	Correct	1
attraction between valence electrons	Incorrect	0
repulsion between core and valence electrons	Correct	1
repulsion between core and valence electrons	Correct	1
attraction between valence electrons	Incorrect	0
attraction between nucleus and valence electrons	Incorrect	0
attraction between valence electrons	Incorrect	0
attraction between nucleus and valence electrons	Incorrect	0
repulsion between core and valence electrons	Correct	1
repulsion between core and valence electrons	Correct	1
attraction between nucleus and valence electrons	Incorrect	0
repulsion between core and valence electrons	Correct	1

repulsion between core and valence electrons	Correct	1
attraction between valence electrons	Incorrect	0
attraction between valence electrons	Incorrect	0
attraction between valence electrons	Incorrect	0
	Incorrect	0
attraction between valence electrons	Incorrect	0
attraction between nucleus and valence electrons	Incorrect	0
attraction between nucleus and valence electrons	Incorrect	0
attraction between valence electrons	Incorrect	0
repulsion between core and valence electrons	Correct	1
False	Correct	1
False	Correct	1
False	Correct	1
	Incorrect	0
True	Incorrect	0
False	Correct	1

False	Correct	1
True	Incorrect	0
False	Correct	1
True	Incorrect	0
True	Incorrect	0
False	Correct	1
True	Incorrect	0
False	Correct	1
False	Correct	1
False	Correct	1
False	Correct	1
False	Correct	1
False	Correct	1
True	Incorrect	0
False	Correct	1
False	Correct	1

False	Correct	1
True	Incorrect	0
False	Correct	1
N and F	Correct	1
N and F	Correct	1
N and F	Correct	1
	Incorrect	0
	Incorrect	0
N and F	Correct	1
N and F	Correct	1
	Incorrect	0
	Incorrect	0
	Incorrect	0
Ca and C	Incorrect	0
Ca and C	Incorrect	0
Na and K	Incorrect	0

	Incorrect	0
N and F	Correct	1
N and F	Correct	1
Na and K	Incorrect	0
	Incorrect	0
N and F	Correct	1
Na and K	Incorrect	0
	Incorrect	0
N and F	Correct	1
N and F	Correct	1
	Incorrect	0
N and F	Correct	1
Zeff = atomic # − core electrons	Correct	1
Zeff = atomic # − core electrons	Correct	1
Zeff = atomic # − core electrons	Correct	1
	Incorrect	0

Zeff = atomic # − core electrons	Correct	1
Zeff = atomic # − core electrons	Correct	1
Zeff = atomic # − core electrons	Correct	1
Zeff = atomic # − core electrons	Correct	1
	Incorrect	0
Zeff = atomic # − core electrons	Correct	1
Zeff = total protons + total electrons	Incorrect	0
Zeff = atomic # − core electrons	Correct	1
Zeff = total protons + core electrons	Incorrect	0
Zeff = atomic # − core electrons	Correct	1
Zeff = atomic # − core electrons	Correct	1
Zeff = atomic # − core electrons	Correct	1
Zeff = atomic # − core electrons	Correct	1
Zeff = atomic # − core electrons	Correct	1
Zeff = atomic # − core electrons	Correct	1
Zeff = total protons + core electrons	Incorrect	0

Zeff = atomic # − core electrons	Correct	1
	Incorrect	0
Zeff = atomic # − core electrons	Correct	1
Zeff = total protons + core electrons	Incorrect	0
Zeff = atomic # − core electrons	Correct	1
Atomic Radius	Correct	1
	Incorrect	0
Metallic Properties	Correct	1
Ionization Energy	Incorrect	0
Electronegativity	Incorrect	0
Metallic Properties	Correct	1
Atomic Radius	Correct	1
Electronegativity	Incorrect	0
	Incorrect	0
Ionization Energy	Incorrect	0
Atomic Radius	Correct	1

Metallic Properties	Correct	1
	Incorrect	0
Atomic Radius	Correct	1
Metallic Properties	Correct	1
Atomic Radius	Correct	1
Ionization Energy	Incorrect	0
Atomic Radius	Correct	1
Atomic Radius	Correct	1
Electronegativity	Incorrect	0
Ionization Energy	Incorrect	0
	Incorrect	0
Atomic Radius	Correct	1
Electronegativity	Incorrect	0
Atomic Radius	Correct	1
less shielding helps nonmetals react quickly	Correct	1
less shielding helps nonmetals react quickly	Correct	1

less shielding helps nonmetals react quickly	Correct	1
	Incorrect	0
less shielding helps nonmetals react quickly	Correct	1
less shielding helps nonmetals react quickly	Correct	1
less shielding helps nonmetals react quickly	Correct	1
less shielding helps nonmetals react quickly	Correct	1
	Incorrect	0
less shielding helps nonmetals react quickly	Correct	1
less shielding helps nonmetals react quickly	Correct	1
less shielding helps nonmetals react quickly	Correct	1
less shielding helps nonmetals react quickly	Correct	1
more shielding helps nonmetals react quickly	Incorrect	0
less shielding helps nonmetals react quickly	Correct	1
less shielding helps nonmetals react quickly	Correct	1
more shielding helps nonmetals react quickly	Incorrect	0
less shielding helps nonmetals react quickly	Correct	1

less shielding helps nonmetals react quickly	Correct	1
more shielding helps nonmetals react quickly	Incorrect	0
	Incorrect	0
	Incorrect	0
more shielding helps nonmetals react quickly	Incorrect	0
less shielding helps nonmetals react quickly	Correct	1
less shielding helps nonmetals react quickly	Correct	1
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 2 = +9	Correct	1
	Incorrect	0

Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 10 = +1	Incorrect	0
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 8 = +3	Incorrect	0
Zeff = 11 - 1 = +10	Incorrect	0
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 10 = +1	Incorrect	0
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 8 = +3	Incorrect	0
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 10 = +1	Incorrect	0
Zeff = 11 - 1 = +10	Incorrect	0
Zeff = 11 - 2 = +9	Correct	1
Zeff = 11 - 2 = +9	Correct	1

Mg has more shielding	Correct	1
Mg has more shielding	Correct	1
Mg has more shielding	Correct	1
	Incorrect	0
Mg has more shielding	Correct	1
Mg has more shielding	Correct	1
Mg has more shielding	Correct	1
Mg has more shielding	Correct	1
	Incorrect	0
Mg has more shielding	Correct	1
Mg has less shielding	Incorrect	0
Mg has more shielding	Correct	1
Mg and O have the same shielding	Incorrect	0
Mg has more shielding	Correct	1
Mg has more shielding	Correct	1
Mg has more shielding	Correct	1

Mg and O have the same shielding	Incorrect	0
Mg has more shielding	Correct	1
Mg has more shielding	Correct	1
Mg has more shielding	Correct	1
Mg has more shielding	Correct	1
	Incorrect	0
Mg has more shielding	Correct	1
Mg has more shielding	Correct	1
Mg has more shielding	Correct	1
Period 7	Correct	1
Period 1	Incorrect	0
Period 7	Correct	1
	Incorrect	0
Period 1	Incorrect	0
Period 7	Correct	1
Period 7	Correct	1

Period 7	Correct	1
	Incorrect	0
Period 7	Correct	1
Period 7	Correct	1
Period 7	Correct	1
Period 3	Incorrect	0
Period 7	Correct	1
Period 7	Correct	1
Period 7	Correct	1
Period 7	Correct	1
Period 7	Correct	1
Period 7	Correct	1
Period 7	Correct	1
Period 7	Correct	1
	Incorrect	0
Period 7	Correct	1

Period 7	Correct	1
Period 7	Correct	1
H +1	Correct	1
N −3	Incorrect	0
H +1	Correct	1
H +1	Correct	1
H +1	Correct	1
H +1	Correct	1
H +1	Correct	1
H +1	Correct	1
	Incorrect	0
H +1	Correct	1
F −1	Incorrect	0
H +1	Correct	1
	Incorrect	0
H +1	Correct	1

H +1	Correct	1
H +1	Correct	1
H +1	Correct	1
H +1	Correct	1
H +1	Correct	1
H +1	Correct	1
H +1	Correct	1
	Incorrect	0
H +1	Correct	1
H +1	Correct	1
H +1	Correct	1

Incorrect	Score (points)	Score without Answer Streak Bonus (points)
0	989	989
1	0	0
0	945	945
0	968	968
1	0	0
0	932	932
0	983	983
1	0	0
1	0	0
1	0	0
1	0	0
0	975	975
0	848	848
1	0	0
0	881	881

0	985	985
1	0	0
1	0	0
1	0	0
1	0	0
1	0	0
1	0	0
1	0	0
1	0	0
0	983	983
0	1088	988
0	960	960
0	1035	935
1	0	0
1	0	0
0	995	895

0	1100	1000
1	0	0
0	778	778
1	0	0
1	0	0
0	1060	960
1	0	0
0	755	755
0	1028	928
0	1080	980
0	765	765
0	948	948
0	530	530
1	0	0
0	718	718
0	753	753

0	968	968
1	0	0
0	1060	960
0	1178	978
0	643	543
0	1175	975
1	0	0
1	0	0
0	1118	918
0	1180	980
1	0	0
1	0	0
1	0	0
1	0	0
1	0	0
1	0	0

1	0	0
0	1080	880
0	1170	970
1	0	0
1	0	0
0	805	705
1	0	0
1	0	0
0	828	728
0	653	553
1	0	0
0	1158	958
0	1300	1000
0	1069	869
0	1300	1000
1	0	0

0	862	862
0	1278	978
0	1294	994
0	824	824
1	0	0
0	827	827
1	0	0
0	990	990
1	0	0
0	808	808
0	1266	966
0	1292	992
0	688	688
0	830	830
0	1195	995
1	0	0

0	863	863
1	0	0
0	1038	838
1	0	0
0	1300	1000
0	1385	985
1	0	0
0	1385	985
1	0	0
1	0	0
0	1308	908
0	1400	1000
1	0	0
1	0	0
1	0	0
0	953	953

0	1080	980
1	0	0
0	773	673
0	1363	963
0	1375	975
1	0	0
0	630	530
0	1285	985
1	0	0
1	0	0
1	0	0
0	903	603
1	0	0
0	1385	985
0	1488	988
0	835	835

0	1500	1000
1	0	0
0	810	810
0	1488	988
0	1500	1000
0	612	612
1	0	0
0	807	807
0	982	882
0	1188	988
0	588	588
1	0	0
0	1500	1000
0	1500	1000
1	0	0
0	1020	820

0	1388	988
1	0	0
1	0	0
1	0	0
1	0	0
0	657	657
0	1500	1000
0	1488	988
0	980	880
0	1488	988
0	953	953
0	930	830
0	1480	980
0	1488	988
0	865	765
1	0	0

0	963	863
1	0	0
0	1278	978
1	0	0
1	0	0
0	1483	983
0	1500	1000
1	0	0
0	1187	887
0	1465	965
1	0	0
0	800	800
1	0	0
1	0	0
0	933	833
0	1487	987

0	1500	1000
0	835	635
0	1492	992
1	0	0
0	898	698
0	1487	987
0	1490	990
0	977	777
1	0	0
0	1060	860
1	0	0
0	1387	987
1	0	0
0	685	685
0	1487	987
0	1490	990

1	0	0
0	1268	868
0	1492	992
0	712	712
0	935	835
1	0	0
0	877	877
0	1008	808
0	1492	992
0	1478	978
1	0	0
0	1463	963
1	0	0
1	0	0
0	1443	943
0	1488	988

0	920	620
1	0	0
0	1128	828
0	633	633
0	1470	970
1	0	0
0	858	758
0	1455	955
0	1483	983
0	798	798
0	1308	808
0	1500	1000
0	863	763
0	1005	805
1	0	0
0	985	885

0	1088	788
0	1488	988
0	1490	990
1	0	0
0	1490	990
0	900	900
0	800	800
0	1460	960
0	1490	990
0	1313	913
1	0	0
0	1263	863
1	0	0
0	1487	987
1	0	0
0	903	703

0	1450	950
0	1500	1000
0	945	845
0	1367	867
0	1490	990
0	1148	948
0	1170	870
1	0	0
0	753	553
0	1250	850
0	1490	990

Current Total Score (points)	Answer Time (%)
989	2.17%
0	28.00%
945	11.00%
968	6.50%
0	10.00%
932	13.67%
983	3.33%
0	22.67%
0	40.33%
0	33.33%
0	16.83%
975	5.00%
848	30.33%
0	48.33%
881	23.83%

985	3.00%
0	38.33%
0	34.33%
0	24.50%
0	0.00%
0	35.67%
0	44.83%
0	28.17%
0	26.50%
983	3.50%
2077	2.50%
960	8.00%
1980	13.00%
968	100.00%
0	67.50%
1927	21.00%

2083	1.50%
0	24.00%
778	44.50%
0	11.50%
0	8.00%
2035	8.00%
848	70.00%
755	49.00%
1909	14.50%
2065	4.00%
765	47.00%
948	10.50%
530	94.00%
0	12.50%
718	56.50%
753	49.50%

968	6.50%
0	14.50%
2043	8.00%
3255	4.50%
1603	91.50%
3155	5.00%
968	100.00%
0	100.00%
3045	16.50%
3263	4.00%
0	100.00%
778	100.00%
0	100.00%
0	35.50%
2035	3.50%
848	70.50%

755	100.00%
2989	24.00%
3235	6.00%
765	96.50%
948	100.00%
1335	59.00%
0	56.00%
718	100.00%
1581	54.50%
1621	89.50%
0	100.00%
3201	8.50%
4555	0.33%
2672	26.17%
4455	0.67%
968	100.00%

862	27.67%
4323	4.50%
4557	1.17%
824	35.17%
778	100.00%
827	34.67%
0	4.67%
3025	2.00%
848	29.67%
1563	38.33%
4255	6.83%
4527	1.67%
1453	62.33%
1778	34.00%
2530	1.00%
0	30.50%

1581	27.50%
1581	100.00%
2659	32.50%
0	52.17%
4501	0.67%
5940	3.00%
2672	100.00%
5840	3.00%
968	95.50%
862	66.50%
5631	18.50%
5957	2.00%
824	52.50%
778	100.00%
827	91.00%
953	9.50%

4105	4.00%
848	100.00%
2336	65.50%
5618	7.50%
5902	5.00%
1453	93.50%
2408	94.00%
3815	3.00%
0	50.50%
1581	85.00%
1581	100.00%
3562	79.50%
0	77.00%
5886	3.00%
7428	2.33%
3507	33.00%

7340	1.33%
968	100.00%
1672	38.00%
7119	2.33%
7457	1.33%
1436	77.67%
778	100.00%
1634	38.67%
1935	23.67%
5293	2.33%
1436	82.33%
2336	65.33%
7118	0.67%
7402	1.33%
1453	83.00%
3428	36.00%

5203	2.33%
0	46.00%
1581	100.00%
1581	100.00%
3562	81.00%
657	68.67%
7386	1.33%
8916	2.33%
4487	24.00%
8828	2.33%
1921	9.33%
2602	34.00%
8599	4.00%
8945	2.33%
2301	47.00%
778	100.00%

2597	27.33%
1935	32.00%
6571	4.33%
1436	6.67%
2336	45.00%
8601	3.33%
8902	1.33%
1453	83.67%
4615	22.67%
6668	7.00%
0	42.67%
2381	40.00%
1581	5.67%
3562	38.33%
1590	33.33%
8873	2.67%

10416	0.67%
5322	73.00%
10320	1.67%
1921	100.00%
3500	60.33%
10086	2.67%
10435	2.00%
3278	44.67%
778	100.00%
3657	28.00%
1935	11.00%
7958	2.67%
1436	41.00%
3021	63.00%
10088	2.67%
10392	2.00%

1453	46.67%
5883	26.33%
8160	1.67%
712	57.67%
3316	33.00%
1581	100.00%
4439	24.67%
2598	38.33%
10365	1.67%
11894	4.50%
5322	10.00%
11783	7.50%
1921	100.00%
3500	58.50%
11529	11.50%
11923	2.50%

4198	76.00%
778	100.00%
4785	34.50%
2568	73.50%
9428	6.00%
1436	31.00%
3879	48.50%
11543	9.00%
11875	3.50%
2251	40.50%
7191	38.50%
9660	1.00%
1575	47.50%
4321	39.00%
1581	100.00%
5424	23.00%

3686	42.50%
11853	2.50%
13384	2.00%
5322	42.33%
13273	2.00%
2821	20.00%
4300	40.00%
12989	8.00%
13413	2.00%
5511	17.33%
778	100.00%
6048	27.33%
2568	20.67%
10915	2.67%
1436	100.00%
4782	59.33%

12993	10.00%
13375	1.00%
3196	31.00%
8558	26.67%
11150	2.00%
2723	10.33%
5491	26.00%
1581	100.00%
6177	89.33%
4936	30.00%
13343	2.00%

Answer Time (seconds)
1,3
16,8
6,6
3,9
6
8,2
2
13,6
24,2
20
10,1
3
18,2
29
14,3

1,8
23
20,6
14,7
0
21,4
26,9
16,9
15,9
2,1
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13,5
4,2

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4,8
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18,8
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2,9
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7,1
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17,9
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1,7
0,2
15,7
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60

16,6
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21,1
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1,2
17,8
23
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37,4
20,4
0,6
18,3

16,5
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19,5
31,3
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0,6
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13,3
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