

MIDDLE SCHOOL SCIENCE STAAR REFERENCE MATERIALS



FORMULAS

$$\text{Average speed} = \frac{\text{total distance}}{\text{total time}}$$

$$s = \frac{d}{t}$$

$$\text{Net force} = (\text{mass})(\text{acceleration})$$

$$F = ma$$

$$a = \frac{F}{m}$$

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PERIODIC TABLE OF THE ELEMENTS

1
1A

1
H
1.008
Hydrogen

2
2A

3
Li
6.94
Lithium

4
Be
9.0122
Beryllium

11
Na
22.990
Sodium

12
Mg
24.305
Magnesium

19
K
39.098
Potassium

20
Ca
40.078
Calcium

37
Rb
85.468
Rubidium

38
Sr
87.62
Strontium

55
Cs
132.91
Cesium

56
Ba
137.33
Barium

87
Fr
Francium

88
Ra
Radium

103
Lr
Lawrencium

104
Rf
Rutherfordium

105
Db
Dubnium

106
Sg
Seaborgium

107
Bh
Bohrium

108
Hs
Hassium

109
Mt
Meitnerium

110
Ds
Darmstadtium

111
Rg
Roentgenium

112
Cn
Copernicium

113
Nh
Nihonium

114
Fl
Flerovium

115
Mc
Moscovium

116
Lv
Livermorium

117
Ts
Tennessine

118
Og
Oganesson

13
3A

14
4A

15
5A

16
6A

17
7A

18
8A

5
B
10.81
Boron

6
C
12.011
Carbon

7
N
14.007
Nitrogen

8
O
15.999
Oxygen

9
F
18.998
Fluorine

10
Ne
20.180
Neon

13
Al
26.982
Aluminum

14
Si
28.085
Silicon

15
P
30.974
Phosphorus

16
S
32.06
Sulfur

17
Cl
35.45
Chlorine

18
Ar
39.948
Argon

31
Ga
69.723
Gallium

32
Ge
72.630
Germanium

33
As
74.922
Arsenic

34
Se
78.971
Selenium

35
Br
79.904
Bromine

36
Kr
83.798
Krypton

49
In
114.82
Indium

50
Sn
118.71
Tin

51
Sb
121.76
Antimony

52
Te
127.60
Tellurium

53
I
126.90
Iodine

54
Xe
131.29
Xenon

81
Tl
204.38
Thallium

82
Pb
207.2
Lead

83
Bi
208.98
Bismuth

84
Po
Polonium

85
At
Astatine

86
Rn
Radon

Atomic number

Symbol

Atomic mass

14

Si

28.085

Silicon

Name

Atomic masses are not listed for elements with no stable or common isotopes.

Lanthanide Series

57
La
138.91
Lanthanum

58
Ce
140.12
Cerium

59
Pr
140.91
Praseodymium

60
Nd
144.24
Neodymium

61
Pm
Promethium

62
Sm
150.36
Samarium

63
Eu
151.96
Europium

64
Gd
157.25
Gadolinium

65
Tb
158.93
Terbium

66
Dy
162.50
Dysprosium

67
Ho
164.93
Holmium

68
Er
167.26
Erbium

69
Tm
168.93
Thulium

70
Yb
173.05
Ytterbium

Actinide Series

89
Ac
Actinium

90
Th
232.04
Thorium

91
Pa
231.04
Protactinium

92
U
238.03
Uranium

93
Np
Neptunium

94
Pu
Plutonium

95
Am
Americium

96
Cm
Curium

97
Bk
Berkelium

98
Cf
Californium

99
Es
Einsteinium

100
Fm
Fermium

101
Md
Mendelevium

102
No
Nobelium

Source: International Union of Pure and Applied Chemistry

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