**KEY**

# Chemistry: *Manometers*

*Directions*: *Solve the following problems. Show your work, including proper units, to ensure full credit.*

98.4 kPa

X mm Hg

0.58 atm

X mm Hg

112.8 kPa

0.78 atm

0 mm Hg

X atm

125.6 kPa

1. 2. 3.

Ans. (#1) = **1.24 atm** Ans. (#2) = **253 mm Hg** Ans (#3) = **297 mm Hg**

0 mm Hg

75.2 kPa

X mm Hg

155 mm Hg

X mm Hg

87.1 kPa

135.5 kPa

208 mm Hg

X atm

4. 5. 6.

Ans. (#4) = **1.06 atm** Ans. (#5) = **808 mm Hg** Ans (#6) = **564 mm Hg**

X atm

623 mm Hg

115.4 kPa

X kPa

465 mm Hg

1.42 atm

510 mm Hg

1.25 atm

X kPa

7. 8. 9.

Ans. (#7) = **58.5 kPa** Ans. (#8) = **205.8 kPa** Ans (#9) = **1.96 atm**

251.8 kPa

844 mm Hg

X mm Hg

1.51 atm

324 mm Hg

X kPa

95 mm Hg

105.9 kPa

X atm

10. 11. 12.

Ans. (#10) = **0.92 atm** Ans. (#11) = **109.8 kPa** Ans (#12) = **1045 mm Hg**

125mm Hg

85.3 kPa

X mm Hg

218 mm Hg

X atm

72.4 kPa

183 mm Hg

X kPa

0.44 atm

13. 14. 15.

Ans. (#13) = **69.0 kPa** Ans. (#14) = **1.00 atm** Ans (#15) = **515 mm Hg**

783 mm Hg

X mm Hg

528 mm Hg

X mm Hg

712 mm Hg

145.9 kPa

X mm Hg

106.0 kPa

16. 17. 18.

Ans. (#16) = **1807 mm Hg** Ans. (#17) = **92 mm Hg** Ans (#18) = **255 mm Hg**

Answers: 1. 1.24 atm 2. 253 mm Hg 3. 297 mm Hg 4. 1.06 atm 5. 808 mm Hg 6. 564 mm Hg

7. 58.6 kPa 8. 205.8 kPa 9. 1.96 atm 10. 0.92 atm 11. 109.8 kPa 12. 1045 mm Hg

13. 69.0 kPa 14. 1.00 atm 15. 515 mm Hg 16. 1807 mm Hg 17. 92 mm Hg 18. 255 mm Hg

WORK IS SHOWN ON POWERPOINT PRESENTATION for several of these.