

Ch 3 practice test**Matching**

Match each item with the correct statement below.

- | | |
|------------------------------|-----------------------|
| a. absolute zero | e. mass |
| b. Kelvin temperature scale | f. significant figure |
| c. Celsius temperature scale | g. precision |
| d. weight | h. accuracy |
-
- | | |
|-------|--|
| _____ | 1. closeness to true value |
| _____ | 2. narrowness of range of measurements |
| _____ | 3. known or estimated in a measurement |
| _____ | 4. the quantity of matter an object contains |
| _____ | 5. the lowest point on the Kelvin scale |
| _____ | 6. the SI scale for temperature |
| _____ | 7. the force of gravity on an object |
| _____ | 8. the non-SI scale for temperature |

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- | | |
|-------|---|
| _____ | 9. The expression of 5008 km in scientific notation is _____. |
| | a. 5.008×10^3 km |
| | b. 50.08×10^{-4} km |
| | c. 5.008×10^{-3} km |
| | d. 5.008×10^4 km |
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- | | |
|-------|--|
| _____ | 10. What is the result of multiplying 2.5×10^{10} by 3.5×10^{-7} ? |
| | a. 8.75×10^{-3} |
| | b. 8.75×10^{17} |
| | c. 8.8×10^3 |
| | d. 8.8×10^{-17} |
-
- | | |
|-------|---|
| _____ | 11. The closeness of a measurement to its true value is a measure of its _____. |
| | a. precision |
| | b. accuracy |
| | c. reproducibility |
| | d. usefulness |
-
- | | |
|-------|---|
| _____ | 12. Which of the following measurements contains two significant figures? |
| | a. 0.004 00 L |
| | b. 0.004 04 L |
| | c. 0.000 44 L |
| | d. 0.004 40 L |
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- | | |
|-------|---|
| _____ | 13. When a test instrument is calibrated, does its accuracy, precision, or reliability improve? |
| | a. precision |
| | b. accuracy |
| | c. reliability |
| | d. all of the above |
-
- | | |
|-------|---|
| _____ | 14. Which of the following measurements (of different masses) is the most accurate? |
| | a. 3.1000 g |
| | b. 3.100 00 g |
| | c. 3.122 22 g |
| | d. 3.000 000 g |
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- | | |
|-------|--|
| _____ | 15. Which group of measurements is the most precise? (Each group of measurements is for a different object.) |
| | a. 2 g, 3 g, 4 g |
| | b. 2.0 g, 3.0 g, 4.0 g |
| | c. 2 g, 2.5 g, 3 g |
| | d. 1 g, 3 g, 5 g |

- _____ 29. What is the SI unit of mass?
a. liter
b. joule
c. candela
d. kilogram
- _____ 30. What is the temperature of absolute zero measured in °C?
a. -373°C
b. -273°C
c. -173°C
d. -73°C
- _____ 31. Which temperature scale has no negative temperatures?
a. Celsius
b. Fahrenheit
c. Joule
d. Kelvin
- _____ 32. What is the boiling point of water in kelvins?
a. 0 K
b. 100 K
c. 273 K
d. 373 K
- _____ 33. Which of the following mass units is the largest?
a. 1 cg
b. 1 dg
c. 1 mg
d. 1 ng
- _____ 34. The weight of an object _____.
a. is the same as its mass
b. depends on its location
c. is not affected by gravity
d. is always the same
- _____ 35. What is the temperature -34°C expressed in kelvins?
a. 139 K
b. 207 K
c. 239 K
d. 339 K
- _____ 36. Chlorine boils at 239 K. What is the boiling point of chlorine expressed in degrees Celsius?
a. 93°C
b. 34°C
c. -61°C
d. -34°C
- _____ 37. What is the quantity 0.0075 meters expressed in centimeters? Use the table above to help you.
a. 0.075 cm
b. 0.75 cm
c. 7.5 cm
d. 70.5 cm
- _____ 38. What is the quantity 7896 millimeters expressed in meters? Use the table above to help you.
a. 7.896 m
b. 78.96 m
c. 789.6 m
d. 789,600 m
- _____ 39. What is the quantity 987 milligrams expressed in grams? Use the table above to help you.
a. 0.000 987 g
b. 0.987 g
c. 9.87 g
d. 98,700 g
- _____ 40. Which of the following equalities is NOT correct? Use the table above to help you.
a. 100 cg = 1 g
b. 1000 mm = 1 m
c. 1 cm³ = 1 mL
d. 10 kg = 1 g
- _____ 41. The quantity 44 liters expressed in cubic meters is _____.
a. 0.000 044 m³
b. 440 000 m³
c. 0.44 m³
d. 0.044 m³
- _____ 42. What is the density of an object having a mass of 8.0 g and a volume of 25 cm³?
a. 0.32 g/cm³
b. 2.0 g/cm³
c. 3.1 g/cm³
d. 200 g/cm³

Name: _____

ID: A

- _____ 43. What is the volume of 80.0 g of ether if the density of ether is 0.70 g/mL?
- a. 5.6×10^1
 - b. 1.1×10^2
 - c. 8.8×10^{-3}
 - d. 8.0×10^1
- _____ 44. As the density of a substance increases, the volume of a given mass of that substance _____.
- a. increases
 - b. is not affected
 - c. decreases
 - d. fluctuates

Ch 3 practice test Answer Section

MATCHING

- | | | | |
|-------------------------|-----------------------|---------|------------|
| 1. ANS: H
OBJ: 3.1.2 | PTS: 1 | DIF: L1 | REF: p. 64 |
| 2. ANS: G
OBJ: 3.1.2 | PTS: 1 | DIF: L1 | REF: p. 64 |
| 3. ANS: F
OBJ: 3.1.3 | PTS: 1 | DIF: L1 | REF: p. 66 |
| 4. ANS: E
OBJ: 3.2.1 | PTS: 1 | DIF: L1 | REF: p. 76 |
| 5. ANS: A
OBJ: 3.2.1 | PTS: 1
STA: Ch.4.f | DIF: L1 | REF: p. 77 |
| 6. ANS: B
OBJ: 3.2.1 | PTS: 1
STA: Ch.4.d | DIF: L1 | REF: p. 77 |
| 7. ANS: D
OBJ: 3.2.2 | PTS: 1 | DIF: L1 | REF: p. 76 |
| 8. ANS: C
OBJ: 3.2.2 | PTS: 1
STA: Ch.4.d | DIF: L1 | REF: p. 76 |

MULTIPLE CHOICE

- | | | | |
|--------------------------|--------|---------|--------------------|
| 9. ANS: A
OBJ: 3.1.1 | PTS: 1 | DIF: L1 | REF: p. 63 |
| 10. ANS: C
OBJ: 3.1.1 | PTS: 1 | DIF: L2 | REF: p. 63 p. 71 |
| 11. ANS: B
OBJ: 3.1.2 | PTS: 1 | DIF: L1 | REF: p. 64 |
| 12. ANS: C
OBJ: 3.1.2 | PTS: 1 | DIF: L1 | REF: p. 66 |
| 13. ANS: B
OBJ: 3.1.2 | PTS: 1 | DIF: L2 | REF: p. 64 |
| 14. ANS: D
OBJ: 3.1.2 | PTS: 1 | DIF: L2 | REF: p. 64 |
| 15. ANS: C
OBJ: 3.1.2 | PTS: 1 | DIF: L2 | REF: p. 64 |
| 16. ANS: C
OBJ: 3.1.2 | PTS: 1 | DIF: L2 | REF: p. 66 |
| 17. ANS: C
OBJ: 3.1.3 | PTS: 1 | DIF: L1 | REF: p. 66 |
| 18. ANS: A
OBJ: 3.1.3 | PTS: 1 | DIF: L1 | REF: p. 66 |
| 19. ANS: B
OBJ: 3.1.3 | PTS: 1 | DIF: L1 | REF: p. 66 |

20.	ANS: D OBJ: 3.1.3	PTS: 1	DIF: L1	REF: p. 66
21.	ANS: B OBJ: 3.1.3	PTS: 1	DIF: L1	REF: p. 68 p. 70
22.	ANS: A OBJ: 3.1.3	PTS: 1	DIF: L2	REF: p. 66 p. 68
23.	ANS: D OBJ: 3.1.3	PTS: 1	DIF: L2	REF: p. 68 p. 71
24.	ANS: A OBJ: 3.1.3	PTS: 1	DIF: L3	REF: p. 68
25.	ANS: D OBJ: 3.2.1	PTS: 1	DIF: L1	REF: p. 74
26.	ANS: B OBJ: 3.2.1	PTS: 1	DIF: L1	REF: p. 73
27.	ANS: D OBJ: 3.2.1	PTS: 1	DIF: L1	REF: p. 73
28.	ANS: A OBJ: 3.2.1	PTS: 1	DIF: L1	REF: p. 74 p. 75
29.	ANS: D OBJ: 3.2.1	PTS: 1	DIF: L1	REF: p. 76
30.	ANS: B OBJ: 3.2.1	PTS: 1 STA: Ch.4.e	DIF: L1	REF: p. 77
31.	ANS: D OBJ: 3.2.1	PTS: 1 STA: Ch.4.f	DIF: L1	REF: p. 77
32.	ANS: D OBJ: 3.2.1	PTS: 1 STA: Ch.4.e	DIF: L1	REF: p. 77
33.	ANS: B OBJ: 3.2.1	PTS: 1	DIF: L2	REF: p. 74 p. 76
34.	ANS: B OBJ: 3.2.2	PTS: 1	DIF: L2	REF: p. 76
35.	ANS: C OBJ: 3.2.3	PTS: 1 STA: Ch.4.e	DIF: L1	REF: p. 77 p. 78
36.	ANS: D OBJ: 3.2.3	PTS: 1 STA: Ch.4.e	DIF: L2	REF: p. 77 p. 78
37.	ANS: B OBJ: 3.3.2	PTS: 1	DIF: L1	REF: p. 84
38.	ANS: A OBJ: 3.3.2	PTS: 1	DIF: L1	REF: p. 84
39.	ANS: B OBJ: 3.3.2	PTS: 1	DIF: L1	REF: p. 84
40.	ANS: D OBJ: 3.3.2	PTS: 1	DIF: L2	REF: p. 84
41.	ANS: D OBJ: 3.3.3	PTS: 1	DIF: L3	REF: p. 84
42.	ANS: A OBJ: 3.4.1	PTS: 1	DIF: L2	REF: p. 90 p. 91
43.	ANS: B OBJ: 3.4.1	PTS: 1	DIF: L2	REF: p. 91

44. ANS: C
OBJ: 3.4.2

PTS: 1

DIF: L2

REF: p. 91