How Many Significant Digits for Each Number?

1) 0.00860 = __3__

2) 0.00100 = __3__

3) 8017 = __4__

4) 2.300×10^{-5} = __4__

5) 2.559×10^{4} = __4__

6) 3.0×10^{-3} = __2__

7) 0.0676 = __3__

8) 4.39×10^{-4} = __3__

9) 0.0004 = __1__

10) 4806 = __4__

11) 2.6×10^{9} = __2__

12) 300 = __1__

13) 0.0506 = __3__

14) 1×10^{-7} = __1__

15) 58.2 = __3__

16) 9090 = __3__

17) 790 = __2__

18) 9950 = __3__

19) 0.21520 = __5__

20) 1×10^{1} = __1__

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1. 0.057 m to km

2. 13 cm^3 to mL

3. 0.986 hours to seconds

4. 3.004 L to mL

5. 86 kg to g

6. 24 cm^3 to L

7. 56,000 µg to kg

8. 56 km to mm

9. 20 km to feet

Worksheet: Metric Conversions Name_____KEY_____

1. 0.057 m to km

$$? km = \frac{0.057 \; m}{1} \times \frac{1 \, km}{1000 \; m} = \boxed{5.7 \times 10^{-5} \, km}$$

2. 13 cm³ to mL

$$? mL = \frac{13 \; cm^3}{1} \times \frac{1 \, mL}{1 \; cm^3} = \boxed{1.3 \times 10^1 \, mL}$$

3. 0.986 hours to seconds

$$? s = \frac{0.986 \; hours}{1} \times \frac{60 \; min}{1 \; hour} \times \frac{60 \, s}{1 \; min} = \boxed{3.55 \times 10^3 \, s}$$

4. 3.004 L to mL

$$? mL = \frac{3.004 \; L}{1} \times \frac{1000 \, mL}{1 \; L} = \boxed{3.004 \times 10^3 \, mL}$$

5. 86 kg to g

$$? g = \frac{86 \; kg}{1} \times \frac{1000 \, g}{1 \; kg} = \boxed{8.6 \times 10^4 \, g}$$

6. 24 cm³ to L

$$? L = \frac{24 \; cm^3}{1} \times \frac{1 \; mL}{1 \; cm^3} \times \frac{1 \, L}{1000 \; mL} = \boxed{2.4 \times 10^{-2} \, L}$$

7. 56,000 µg to kg

$$? kg = \frac{56,000 \; \mu g}{1} \times \frac{1 \; g}{1,000,000 \; \mu g} \times \frac{1 \, kg}{1000 \; g} = \boxed{5.6 \times 10^{-5} \, kg}$$

8. 56 km to mm

$$? mm = \frac{56 \; km}{1} \times \frac{1000 \; m}{1 \; km} \times \frac{1000 \, mm}{1 \; m} = \boxed{5.6 \times 10^7 \, mm}$$

9. 20 km to feet

$$? feet = \frac{20 \; km}{1} \times \frac{1000 \; m}{1 \; km} \times \frac{100 \; cm}{1 \; m} \times \frac{1 \; in}{2.54 \; cm} \times \frac{1 \, foot}{12 \; in} = \boxed{7 \times 10^4 \, feet}$$

CHEMISTRY: A Study of Matter

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