Round Robin Sheet 1

*Note on significant figures: If the number ends in a 0, this answer key assumes it counts as a sig. fig.

Directions: You will have about 3 minutes to do the problem in your section. At the signal pass your paper to the left, check the problem done before you, then write your initials in the blank and do the next problem.

As a group of 4, you will solve the problems on this sheet. Underline the Q. Circle the variables. SHOW ALL MATH WORK!

Problem 1: Solver initials ____________

Use D=m/V to solve: A brick has a mass of 4kg. It occupies 0.8 L of space. What is its density?

\[
D = \frac{m}{V} = \frac{4 \text{ kg}}{0.8 \text{ L}} = 5 \text{ kg/L}
\]

Problem 2: Solver initials ____________

Use D=m/V to solve: What volume does a 20g aluminum block occupy (D_{Al} = 2.70g/mL)?

\[
V = \frac{m}{D} = \frac{20 \text{ g}}{2.70 \text{ g/mL}} = 7.407 \text{ mL} \approx 7.4 \text{ mL} (2 \text{ s.f.})
\]

Problem 3: Solver initials ____________

Use D=m/V to solve: Iron has a density of 7.87 g/mL. What mass of iron occupies a volume of 20mL?

\[
M = \left(7.87 \frac{\text{g}}{\text{mL}}\right) \times (20 \text{ mL}) = 157.4 \text{ g} \approx 160 \text{ g} (2 \text{ s.f.})
\]

Problem 4: Solver initials ____________

Use D=m/V to solve: A tin can has a density of 7.28g/mL and a volume of 300.1 mL. What is the mass of the tin can?

\[
M = \left(7.28 \frac{\text{g}}{\text{mL}}\right) \times (300.1 \text{ mL}) = 2184.7 \text{ g} \approx 2180 \text{ g} (3 \text{ s.f.})
\]
Round Robin Sheet 2

Directions: You will have about 3 minutes to do the problem in your section. At the signal pass your paper to the left, check the problem done before you, then write your initials in the blank and do the next problem.

As a group of 4, you will solve the problems on this sheet. Underline the Q. Circle the variables. SHOW ALL MATH WORK!

Problem 1: Solver initials _______________
Use D=m/V to solve: A brick has a mass of 3kg. It occupies 0.75 L of space. What is it the density of the brick?

$$D = \frac{m}{V}$$
$$D = \frac{3 \text{ kg}}{0.75 \text{ L}} = 4 \text{ kg/L}$$

Problem 2: Solver initials _______________
Use D=m/V to solve: What volume does a 60g aluminum block occupy (D_{Al} = 2.70g/mL)?

$$V = \frac{m}{D} = \frac{60 \text{ g}}{2.70 \text{ g/mL}} = 22.222 \ldots \text{ mL} \approx 22 \text{ mL} \ (2 \text{ s.f.})$$

Problem 3: Solver initials _______________
Use D=m/V to solve: Iron has a density of 7.87 g/mL. What mass of iron occupies a volume of 50mL?

$$M = (7.87 \frac{\text{ g}}{\text{ mL}}) \times (50 \text{ mL}) = 393.5 \text{ g} \approx 390 \text{ g} \ (2 \text{ s.f.})$$

Problem 4: Solver initials _______________
Use D=m/V to solve: A tin can has a density of 7.28g/mL and a volume of 250 mL. What is the mass of the tin can?

$$M = (7.28 \frac{\text{ g}}{\text{ mL}}) \times (250 \text{ mL}) = 1,820 \text{ g}$$
**Round Robin Sheet 3**

**Directions:** You will have about 3 minutes to do the problem in your section. At the signal pass your paper to the left, check the problem done before you, then write your initials in the blank and do the next problem.

As a group of 4, you will solve the problems on this sheet. Underline the Q. Circle the variables. SHOW ALL MATH WORK!

Problem 1: Solver initials ______________

**Use D=m/V to solve:** A brick has a mass of 5kg. It occupies 1.1 L of space. What is it the density of the brick?

\[
D = \frac{m}{V} = \frac{5 \text{ kg}}{1.1 \text{ L}} = 4.5454 \ldots \text{kg/L} \approx 5 \text{ kg/L (1 s.f.)}
\]

Problem 2: Solver initials ______________

**Use D=m/V to solve:** What volume does a 25g aluminum block occupy (\(D_{Al} = 2.70 \text{g/mL}\))?

\[
V = \frac{m}{D} = \frac{25 \text{ g}}{2.70 \text{ g/mL}} = 9.259 \ldots \text{mL} \approx 9.3 \text{ mL (2 s.f.)}
\]

Problem 3: Solver initials ______________

**Use D=m/V to solve:** Iron has a density of 7.87 g/mL. What mass of iron occupies a volume of 300mL?

\[
M = \left(7.87 \frac{\text{g}}{\text{mL}}\right) \times (300 \text{ mL}) = 2361 \text{ g} \approx 2,360 \text{ g (3 s.f.)}
\]

Problem 4: Solver initials ______________

**Use D=m/V to solve:** A tin can has a density of 7.28g/mL and a volume of 500 mL. What is the mass of the tin can?

\[
M = \left(7.28 \frac{\text{g}}{\text{mL}}\right) \times (500 \text{ mL}) = 3,640 \text{ g}
\]
Round Robin Sheet 4

Directions: You will have about 3 minutes to do the problem in your section. At the signal pass your paper to the left, check the problem done before you, then write your initials in the blank and do the next problem.

As a group of 4, you will solve the problems on this sheet. Underline the Q. Circle the variables. SHOW ALL MATH WORK!

Problem 1: Solver initials ____________
Use D=m/V to solve: A brick has a mass of 2kg. It occupies 0.5 L of space. What is it the density of the brick?

\[ D = \frac{m}{V} \]

\[ D = \frac{2\text{ kg}}{0.5\text{ L}} = 4\text{ kg/L} \]

Problem 2: Solver initials ____________
Use D=m/V to solve: What volume does a 10g aluminum block occupy (D_{Al} = 2.70g/mL)?

\[ D \rightarrow D \times V = m \rightarrow V = \frac{m}{D} \]

\[ V = \frac{10\text{ g}}{2.70\text{ g/mL}} = 3.703 \ldots \text{mL} \approx 3.7\text{ mL} \] (2 s.f.)

Problem 3: Solver initials ____________
Use D=m/V to solve: Iron has a density of 7.87 g/mL. What mass of iron occupies a volume of 450mL?

\[ D \rightarrow D \times V = m \]

\[ M = \left(7.87\frac{\text{ g}}{\text{ mL}}\right) \times (450\text{ mL}) = 3,541.5 \approx 3,540\text{ g} \] (3 s.f.)

Problem 4: Solver initials ____________
Use D=m/V to solve: A tin can has a density of 7.28 g/mL and a volume of 50 mL. What is the mass of the tin can?

\[ D \rightarrow D \times V = m \]

\[ M = \left(7.28\frac{\text{ g}}{\text{ mL}}\right) \times (50\text{ mL}) = 364 \approx 360\text{ g} \] (2 s.f.)