4.7 Classwork: Density of 3-dimensional objects, weight and cost

1. Find the weight of a metal block with a volume of 20 cubic inches and a density of 0.75 pounds per cubic inch.

2. A large block of ice has a volume of 45 liters. The density of ice (water) is one kilogram per liter. Find the weight of the ice.

3. A tank of gasoline holds 20 gallons. Find the cost to completely fill the tank if gasoline costs \$2.35 per gallon.

4. A bar of solid gold is in the shape of a rectangular prism having a length of 10 cm, width of 4 cm, and thickness of 1.5 cm. The density of gold is 19.3 grams per cubic cm, and its approximate market value is \$50 per gram.
   (a) Find the weight of the bar of gold.

   (b) Find its value in dollars.

Applying density ratios

5. Find the weight of a metal block with a volume of 20 cubic inches and a density of 0.75 pounds per cubic inch.

6. A large block of ice has a volume of 45 liters. The density of ice (water) is one kilogram per liter. Find the weight of the ice.

7. A tank of gasoline holds 20 gallons. Find the cost to completely fill the tank if gasoline costs \$2.35 per gallon.

8. A bar of solid gold is in the shape of a rectangular prism having a length of 10 cm, width of 4 cm, and thickness of 1.5 cm. The density of gold is 19.3 grams per cubic cm, and its approximate market value is \$50 per gram.

   (a) Find the weight of the bar of gold.

   (b) Find its value in dollars.