

Unit 8: Putting It All Together

ADVANCED • SET 3

Name: _____ Date: _____

Solve each problem and write just the value — a number, a fraction like $\frac{3}{4}$, or a coordinate pair like (3, 10). Leave units off your answers.

1. A school makes a worm bin out of two rectangular boxes joined together. The big box is 12 cm long, 8 cm wide, and 5 cm tall. The small box is 6 cm long, 8 cm wide, and 4 cm tall. What is the total volume of the worm bin in cubic centimeters?

Answer: _____

3. One batch of granola uses $\frac{2}{3}$ cup of oats. Maya has $5\frac{1}{4}$ cups of oats. How many complete batches can she make?

Answer: _____

5. Jonas wants to hike $2\frac{1}{2}$ km today. He hiked $\frac{5}{6}$ km before lunch and $\frac{3}{4}$ km after lunch. How many kilometers does he still have left to hike? Write your answer as a fraction.

Answer: _____

7. On a coordinate grid, a robot starts at the point (4, 7). It moves 6 units right, then 5 units up, then 9 units left, then 2 units down. What are the coordinates of the robot now?

Answer: _____

9. A jug holds 3.75 liters of lemonade. Nadia pours $\frac{2}{5}$ of the lemonade into a pitcher. Then 0.8 liter is poured out of the pitcher into cups. How many liters are left in the pitcher?

Answer: _____

2. A rectangular aquarium holds 2,160 cubic inches of water when it is completely full. The bottom of the aquarium is 18 inches long and 10 inches wide. How tall is the aquarium in inches?

Answer: _____

4. At the school store, Devin buys 3 packs of markers for \$4.85 each and 4 bottles of glue for \$1.35 each. He pays with a \$30 bill. How much change does he get, in dollars?

Answer: _____

6. A pottery teacher has 0.72 kg of clay. She puts 0.045 kg of clay into each small bag. How many bags does she fill?

Answer: _____

8. A crate is 10 inches long, 6 inches wide, and 8 inches tall. It is filled $\frac{5}{8}$ of the way with packing foam. Then $\frac{1}{4}$ of that foam is taken out. How many cubic inches of foam are left in the crate?

Answer: _____

10. A storage bin is 12 cm long, 9 cm wide, and 6 cm tall. How many solid cubes with edges of 3 cm exactly fill the bin?

Answer: _____

11. A rectangular garden bed has corners at (1, 2), (1, 14), (9, 14), and (9, 2) on a coordinate grid. Each unit stands for 1 meter. What is the perimeter of the garden bed in meters?

Answer: _____

12. A tub fills at 1.25 liters per minute for 6 minutes. Then $\frac{3}{4}$ of the water in the tub is used to water plants. How many liters of water are left in the tub?

Answer: _____