

Lesson 15 Practice Problems

1. Jada measured the height of a plant in a science experiment and finds that, to the nearest $\frac{1}{4}$ of an inch, it is $4\frac{3}{4}$ inches.
 - a. What is the largest the actual height of the plant could be?
 - b. What is the smallest the actual height of the plant could be?
 - c. How large could the percent error in Jada's measurement be?

2. The reading on a car's speedometer has 1.6% maximum error. The speed limit on a road is 65 miles per hour.
 - a. The speedometer reads 64 miles per hour. Is it possible that the car is going over the speed limit?
 - b. The speedometer reads 66 miles per hour. Is the car definitely going over the speed limit?

3. Water is running into a bathtub at a constant rate. After 2 minutes, the tub is filled with 2.5 gallons of water. Write two equations for this proportional relationship. Use w for the amount of water (gallons) and t for time (minutes). In each case, what does the constant of proportionality tell you about the situation?

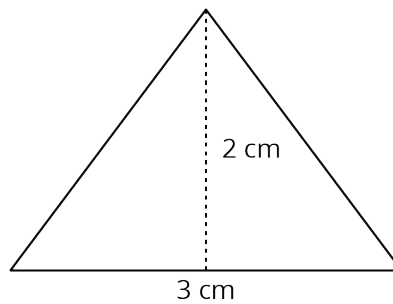
(From Unit 2, Lesson 5.)

4. Noah picked 3 kg of cherries. Jada picked half as many cherries as Noah. How many total kg of cherries did Jada and Noah pick?

- A. $3 + 0.5$
- B. $3 - 0.5$
- C. $(1 + 0.5) \cdot 3$
- D. $1 + 0.5 \cdot 3$

(From Unit 4, Lesson 5.)

5. Here is a shape with some measurements in cm.



a. Complete the table showing the area of different scaled copies of the triangle.

scale factor	area (cm ²)
1	
2	
5	
s	

b. Is the relationship between the scale factor and the area of the scaled copy proportional?

(From Unit 3, Lesson 7.)