## Unit 4 Lesson 15 Cumulative 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.
	1. What is the largest the actual height of the plant could be?
	2. What is the smallest the actual height of the plant could be?
	3. 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.
	1. The speedometer reads 64 miles per hour. Is it possible that the car is going over the speed limit?
	2. 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.)
1. 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?
	1. $3+0.5$
	2. $3−0.5$
	3. $\left(1+0.5\right)⋅3$
	4. $1+0.5⋅3$
* (From Unit 4, Lesson 5.)
1. Here is a shape with some measurements in cm.
* 
	1. Complete the table showing the area of different scaled copies of the triangle.

|  |  |
| --- | --- |
| * + scale factor
 | * + area (cm2)
 |
| * + 1
 |  |
| * + 2
 |  |
| * + 5
 |  |
| * + $s$
 |  |

* 1. Is the relationship between the scale factor and the area of the scaled copy proportional?
* (From Unit 3, Lesson 7.)



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