## Unit 7 Lesson 14 Cumulative Practice Problems

1. Evaluate each expression, giving the answer in scientific notation:
	1. $5.3×10^{4}+4.7×10^{4}$
	2. $3.7×10^{6}−3.3×10^{6}$
	3. $4.8×10^{-3}+6.3×10^{-3}$
	4. $6.6×10^{-5}−6.1×10^{-5}$
	5. Write a scenario that describes what is happening in the graph.
	6. What is happening at 5 minutes?
	7. What does the slope of the line between 6 and 8 minutes mean?
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* (From Unit 6, Lesson 10.)
1. Apples cost $1 each. Oranges cost $2 each. You have $10 and want to buy 8 pieces of fruit. One graph shows combinations of apples and oranges that total to $10. The other graph shows combinations of apples and oranges that total to 8 pieces of fruit.
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	1. Name one combination of 8 fruits shown on the graph that whose cost does *not* total to $10.
	2. Name one combination of fruits shown on the graph whose cost totals to $10 that are *not* 8 fruits all together.
	3. How many apples and oranges would you need to have 8 fruits that cost $10 at the same time?
* (From Unit 5, Lesson 12.)
1. Solve each equation and check your solution.
* $-2(3x−4)=4(x+3)+6$
* $\frac{1}{2}(z+4)−6=-2z+8$
* $4w−7=6w+31$
* (From Unit 4, Lesson 13.)
1. Ecologists measure the body length and wingspan of 127 butterfly specimens caught in a single field.
	1. Draw a line that you think is a good fit for the data.
	2. Write an equation for the line.
	3. What does the slope of the line tell you about the wingspans and lengths of these butterflies?
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* (From Unit 5, Lesson 20.)
1. The two triangles are similar. Find $x$.
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* (From Unit 2, Lesson 12.)



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