5.1-5.4. Graphing Practice

Graph all the situations listed below and answer the corresponding questions.

When graphing remember to:

- Think about where all your data will fall in order to choose the appropriate graph (ie, if all information is falling in Q1, then you only need Q1 graph paper, etc.)
- Include an overall title for your graph
- Include a title for the x & y axis (be specific)
- Include appropriate intervals for the units on the x & y axis (you may want to calculate slope to help determine appropriate intervals)
- Think about whether the situation is a Proportional Relationship or not
- Graph ordered pairs throughout the ENTIRE coordinate plane
- Use a straight edge to connect the ordered pairs, if needed (Is the graph continuous or discrete?)
- Use arrows to show the situation extended off to infinity, if needed

1) A 12-inch candle burns at a rate of 1 inch per hour.

a. Draw a graph which models this situation.

b. How long will the candle last?

2) **Error Analysis** A tree grows 5 inches each year. Angela is asked to find when the tree will be $1\frac{2}{3}$ feet tall. Angela incorrectly says 20 years.

a. Draw a graph which models the situation.

b. How many years will it take for the tree to be $1\frac{2}{3}$ feet tall?

c. Which mistake might Angela have made?

A. Angela did not convert the height of the tree correctly.

B. Angela gave the height of the tree in inches not the number of years.

C. Angela gave the height of the tree in feet not the number of years.

D. Angela drew a graph with a negative relationship instead of a positive relationship.

3) Your neighbor burns 117 Calories in 13 minutes cross-country skiing. There is a proportional relationship between Calories burned and time.

a. Find the unit rate.

b. Draw a graph which represents the relationship between time and Calories burned.

4) **Think About the Process** A dry cleaning company charges $14 to clean and press 2 jackets.

a. Draw a graph of the relation.

Find the cost to clean and press 4 jackets.

5.1-5.4. Graphing Practice

Key

Graph all the situations listed below and answer the corresponding questions.

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- Use arrows to show the situation extended off to infinity, if needed

1) A 12-inch candle burns at a rate of 1 inch per hour.

a. Draw a graph which models this situation. See attached

b. How long will the candle last? 12 hours

2) **Error Analysis** A tree grows 5 inches each year. Angela is asked to find when the tree will be $1\frac{2}{3}$ feet tall. Angela incorrectly says 20 years.

$1\frac{2}{3}\,\text{ft} \cdot \frac{12\,\text{in}}{1\,\text{ft}} = 20\,\text{in}$

a. Draw a graph which models the situation. See attached

b. How many years will it take for the tree to be $1\frac{2}{3}$ feet tall? 4 years

c. Which mistake might Angela have made?

A. Angela did not convert the height of the tree correctly.

B. Angela gave the height of the tree in inches not the number of years.

C. Angela gave the height of the tree in feet not the number of years.

D. Angela drew a graph with a negative relationship instead of a positive relationship.

3) Your neighbor burns 117 Calories in 13 minutes cross-country skiing. There is a proportional relationship between Calories burned and time.

$\frac{117\,\text{calories}}{13\,\text{min}} = \frac{9\,\text{calories}}{1\,\text{min}}$

a. Find the unit rate.

b. Draw a graph which represents the relationship between time and Calories burned. See attached

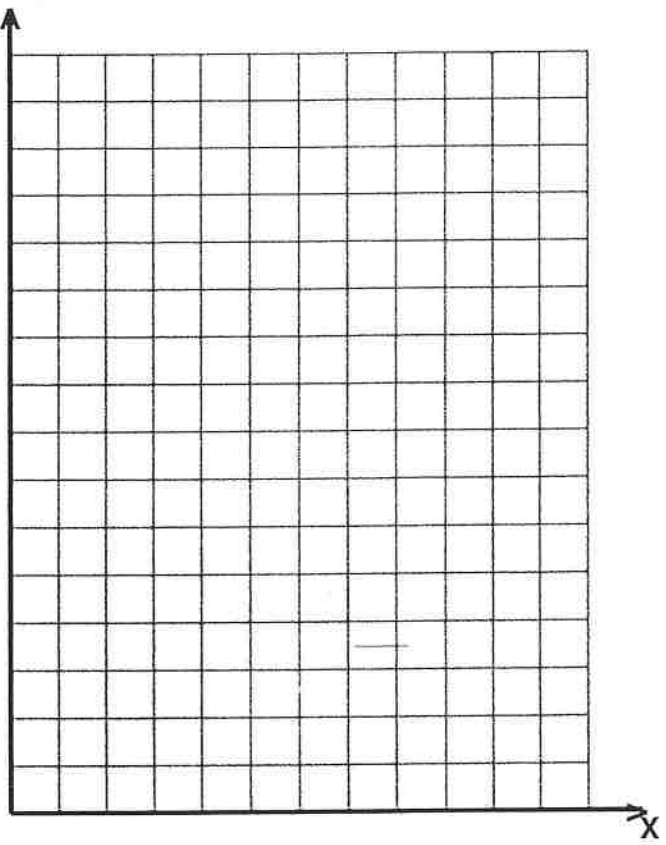
4) **Think About the Process** A dry cleaning company charges $14 to clean and press 2 jackets.

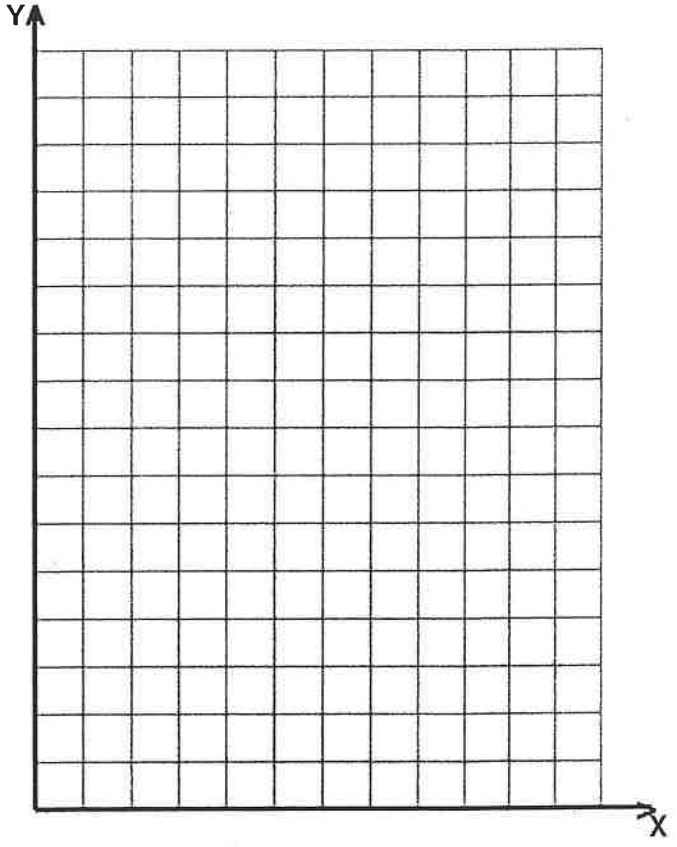
$\frac{\$14}{2} = \$7/\text{jacket}$

a. Draw a graph of the relation. See attached

Find the cost to clean and press 4 jackets.

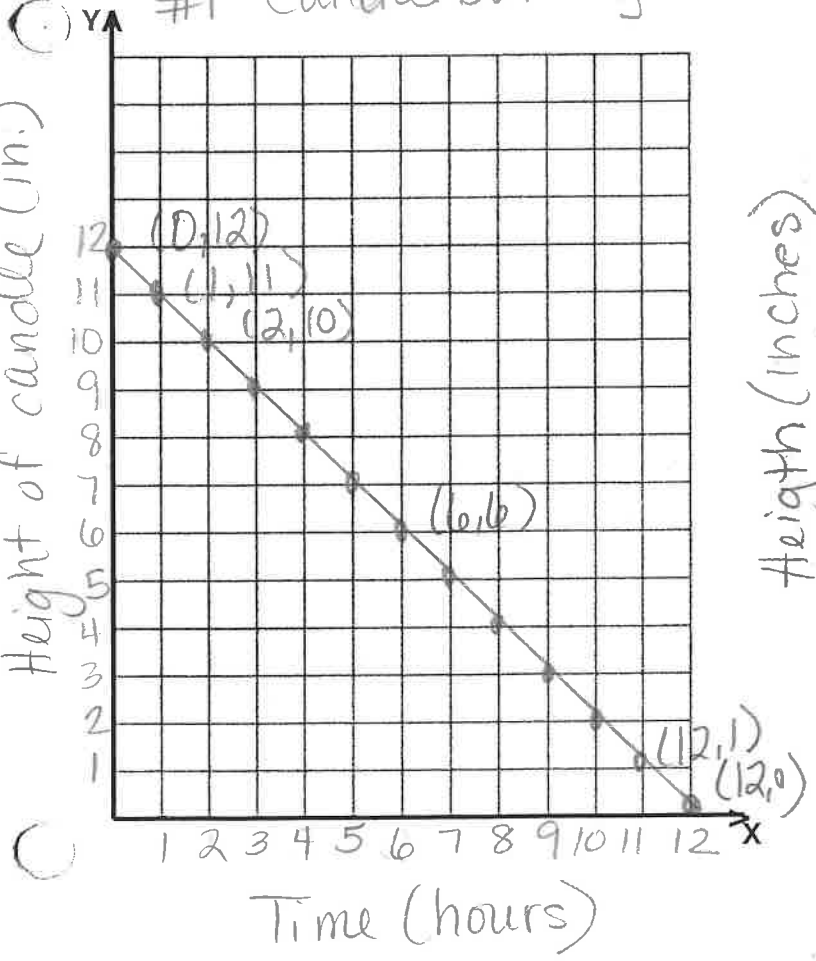
$\$7(4) = \$28$

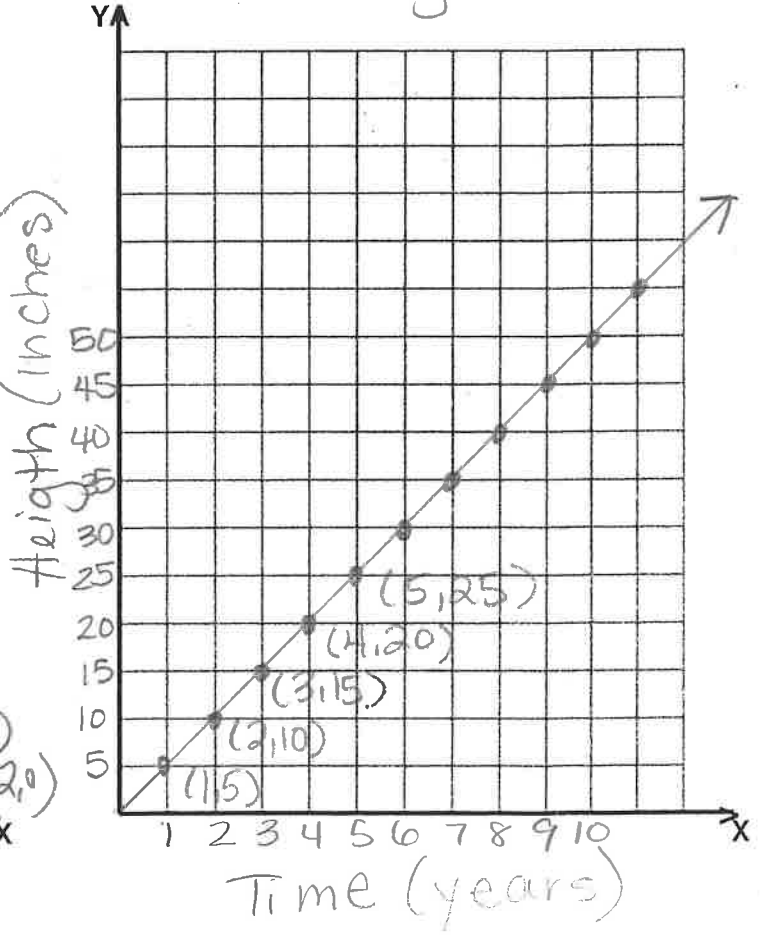


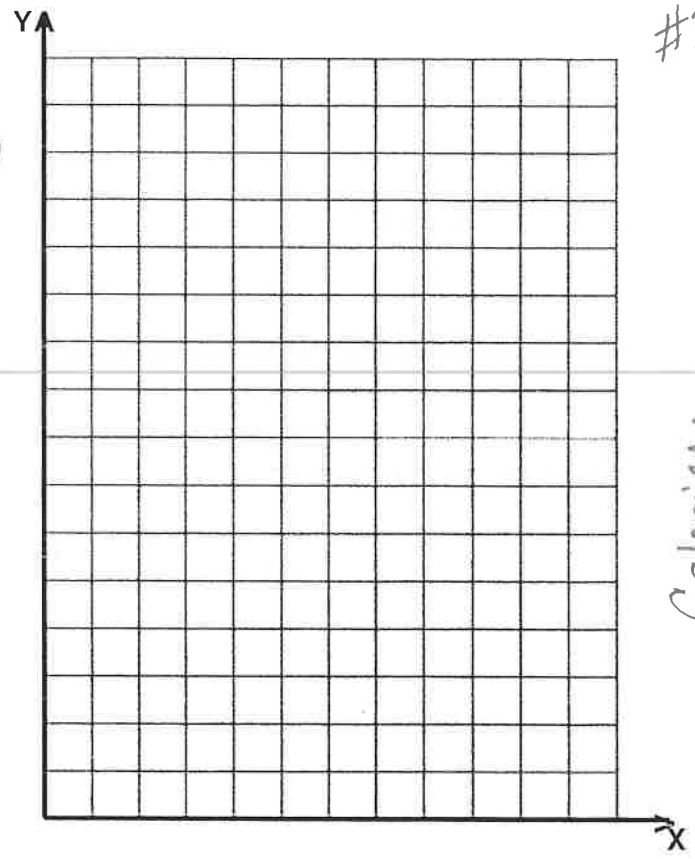


#1 Candle burning

#2 Growing Tree







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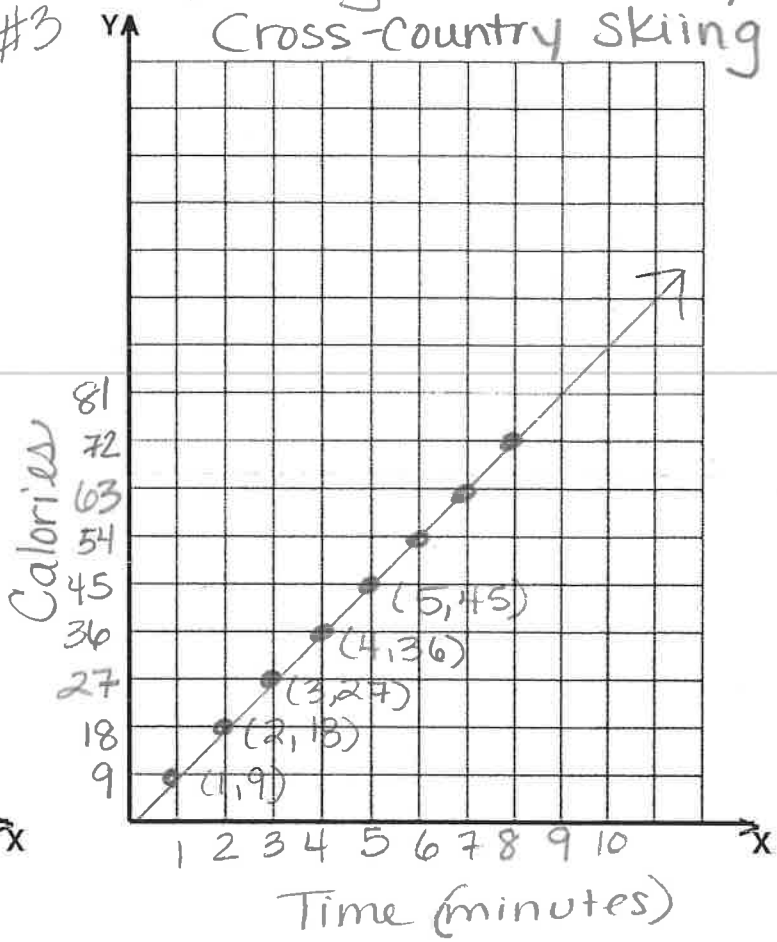

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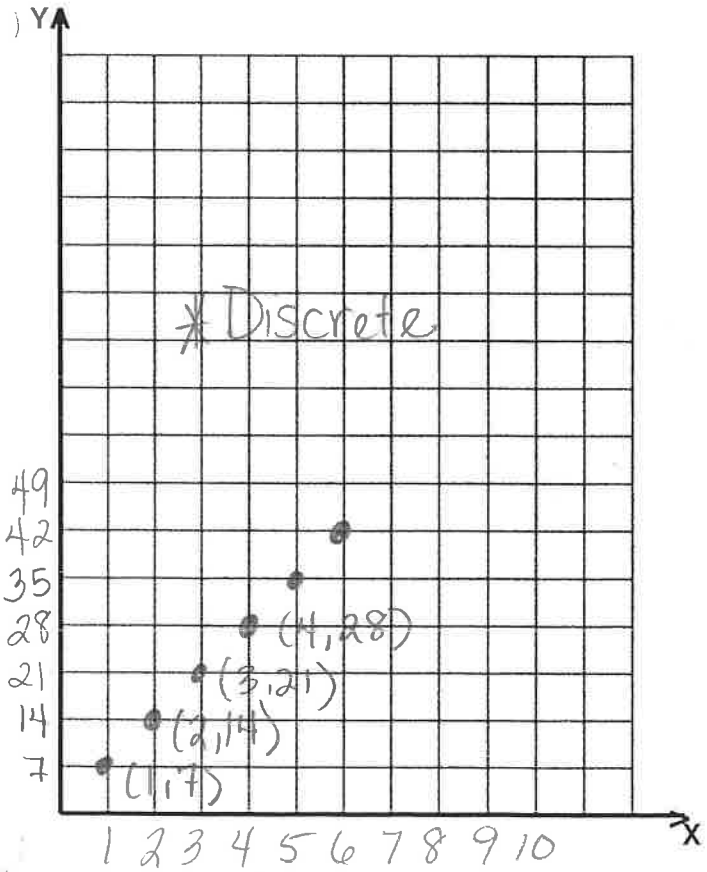

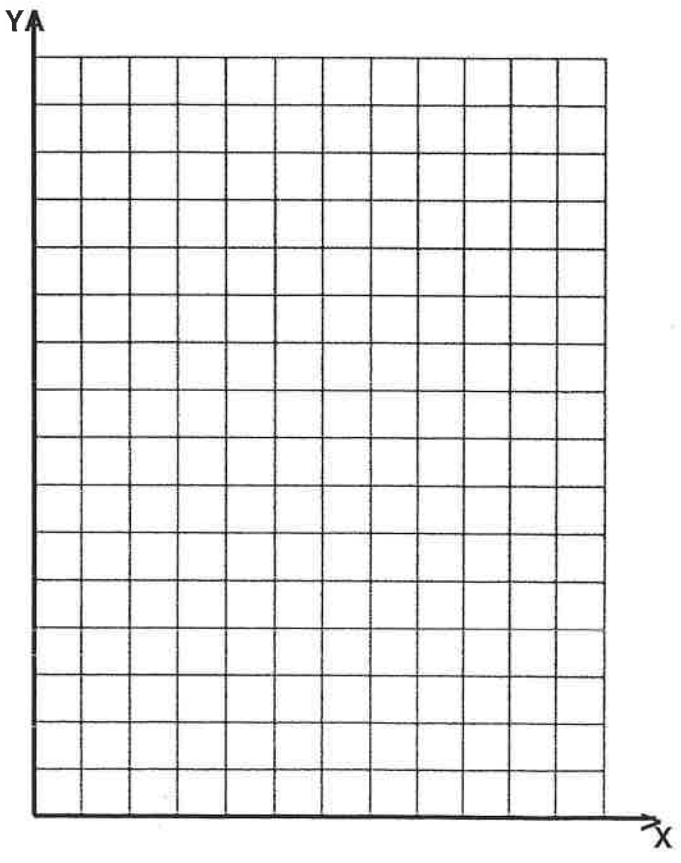

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