

NAME: \_\_\_\_\_



# Task Sheet 7

7) Joyce decides that she would like a deck built at the back door of her house. She gets quotes from two construction companies:

Company	Initial Cost	Daily Cost
Joe's Decks and Landscaping	\$2500	\$150
King Street Deck Company	\$3250	\$125



Joyce uses an algebraic formula to compare the two quotes. **C** represents the total cost, and **x** represents the number of days it takes to finish the job.

- $C = 2500 + 150x$
- $C = 3250 + 125x$

Complete the following charts and compare the quotes of these two companies. Remember to show your work.

**a) 5 days**

i) Joe's Decks and Landscaping

Answer: \_\_\_\_\_

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ii) King Street Deck Company

Answer: \_\_\_\_\_

**b) 8 days**

i) Joe's Decks and Landscaping

Answer: \_\_\_\_\_

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ii) King Street Deck Company

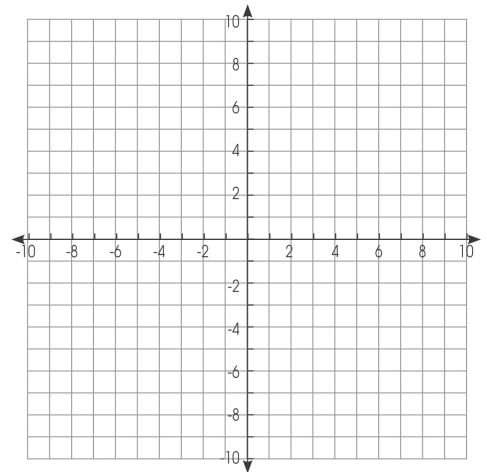
Answer: \_\_\_\_\_



**4a) Plot the following equation on the grid:  $y = 2x + 1$**   
**Draw a straight line through the coordinates.**  
**First - complete the chart below.**

Ex:  $y = 2(-4) + 1 = -7$

x	-4	-3	-2	-1	0	1	2
$y = 2x + 1$	-7						



**b) Complete the following patterns:**

i) 17, 23, 29, \_\_\_\_\_, \_\_\_\_\_.

ii) -26, -17, -8, 1, \_\_\_\_\_, \_\_\_\_\_.

iii) 42, 38, 34, \_\_\_\_\_, \_\_\_\_\_.

iv) -12, 2, 16, \_\_\_\_\_, \_\_\_\_\_.

**c) Solve the following.**

i) If  $a + 6 = 13$  and  $a + b + 9 = 21$ ,  $a = \underline{\hspace{1cm}}$  and  $b = \underline{\hspace{1cm}}$

ii) If  $c + d = 10$  and  $c + d + e = 16$   $e = \underline{\hspace{1cm}}$

iii) If  $4 + f = 8$  and  $4 + f + g = 12$   $f = \underline{\hspace{1cm}}$  and  $g = \underline{\hspace{1cm}}$

**d) Write each as a verbal expression. Ex:  $a \times 10 =$  A number times ten.**

i)  $y \div 2 = \underline{\hspace{2cm}}$

ii)  $b + 8 = \underline{\hspace{2cm}}$

iii)  $s^3 = \underline{\hspace{2cm}}$

iv)  $c - 14 = \underline{\hspace{2cm}}$

**e) Find each Quotient. Ex:  $9 \div -3 = -3$**

i)  $12 \div -4 = \underline{\hspace{1cm}}$

ii)  $-30 \div -3 = \underline{\hspace{1cm}}$

iii)  $75 \div -15 = \underline{\hspace{1cm}}$

iv)  $-56 \div 8 = \underline{\hspace{1cm}}$

**f) Simplify each expression using the Distributive Property. Ex:  $6(2x + 5) = 12x + 30$**

i)  $-5(x + 7)$

ii)  $3(2 + 7y)$

iii)  $(6x + 8) \times 4$

iv)  $(-2 - 4x) \times -7$



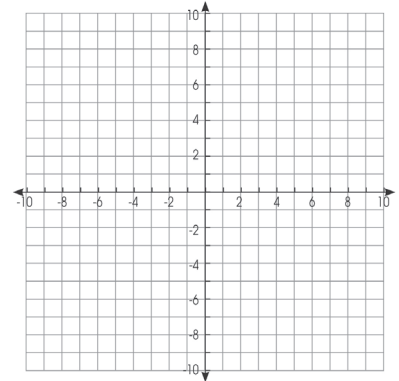
8a) Plot the following equation on the grid:

$$y = -3x - 2$$

Draw a straight line through the coordinates.

First - complete the chart below.

x	-4	-3	-2	-1	0	1	2
$y = -3x - 2$							



b) Solve the following.

i) If  $a - 4 = 4$  and  $a + b + 3 = 18$      $a = \underline{\hspace{1cm}}$  and  $b = \underline{\hspace{1cm}}$

ii) If  $c + d = 10$  and  $c + d + e = 30$      $e = \underline{\hspace{1cm}}$

iii) If  $7 + f = 15$  and  $5 + f + g = 21$      $f = \underline{\hspace{1cm}}$  and  $g = \underline{\hspace{1cm}}$

c) Find each sum.

i)  $(-9) - 5.2 = \underline{\hspace{1cm}}$

ii)  $(-6.3) + (-4.5) = \underline{\hspace{1cm}}$

iii)  $(3.3) - (-6.6) = \underline{\hspace{1cm}}$

d) Find each Quotient.

i)  $-36 \div 12 = \underline{\hspace{1cm}}$

ii)  $-100 \div -5 = \underline{\hspace{1cm}}$

iii)  $153 \div -17 = \underline{\hspace{1cm}}$

iv)  $117 \div 9 = \underline{\hspace{1cm}}$

e) Simplify each expression using the Distributive Property.

i)  $-15(a + 17) =$

ii)  $6(11 + 4y) =$

iii)  $(3x - 12) \times 8 =$

f) Solve each equation.

i)  $6 = x \div 4 + 2$

ii)  $-2 = \frac{10+x}{6}$

iii)  $-8 = x \div 2 - 2$

iv)  $-15 = -4x + 5$

**Reflection**

Determine which of the following alternatives follows the rules to this pattern: *multiply by 2, add 26, subtract 4* (You may use a calculator for help.)

- i. 16, 54, 130, 278    ii. 14, 50, 123, 268    iii. 8, 38, 98, 218    iv. 26, 74, 172, 364