

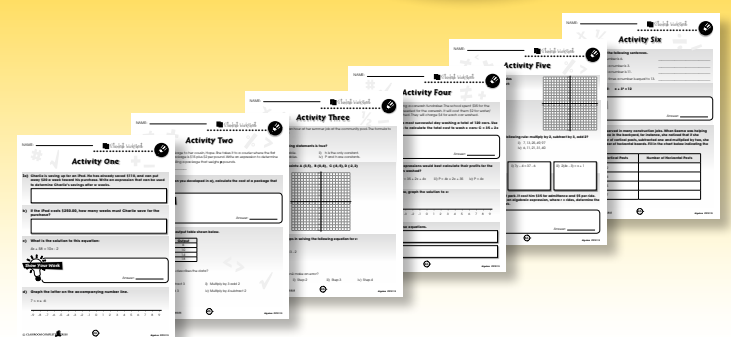
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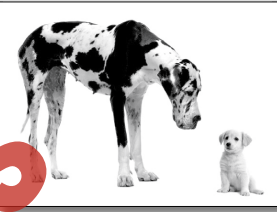
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## Task Sheet 4

- 4a) Joanie is planning to get a dog for her birthday next week. She decides to research the lifespan of different breeds of dogs before making her choice. In comparing "dog years" to human age, she has read that many people believe a large dog ages 12 years during its first year of life, and then seven years per calendar year from then on. Using the chart below, calculate the Equivalent Human Age for a large dog.



Large Dog's Age in Years	0	1	2	3	4	5	6	7	8
Equivalent Human Age	0								

- b) Joanie's research showed that some smaller breeds of dogs (i.e. Terriers, Poodles) have a greater life expectancy than larger dogs. According to Joanie's calculations, a smaller dog ages 12 years during its first year of life, and then five years per calendar year from then on. Using the chart below, calculate the Equivalent Human Age for a small dog.

Small Dog's Age in Years	0	1	2	3	4	5	6	7	8
Equivalent Human Age	0								

- c) The combination of baseballs, footballs and soccer balls are shown. Complete the chart below to show the worth of the different balls, then calculate the SUM (Total price). The football is completed for you.

			= \$55	<b>Football</b>	\$20
			= \$47	<b>Baseball</b>	
			= \$50	<b>Soccer Ball</b>	
			= \$52	<b>SUM</b>	
= \$72	= \$70	= \$62			



## 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.

$$\bullet C = 2500 + 150x \quad \bullet C = 3250 + 125x$$

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: \_\_\_\_\_
- ii) King Street Deck Company  
Answer: \_\_\_\_\_
- b) **8 days**
- i) Joe's Decks and Landscaping  
Answer: \_\_\_\_\_
- ii) King Street Deck Company  
Answer: \_\_\_\_\_



## Task Sheet 10

What's the Meaning of this?

- 10a) If Joanne can buy C chocolate bars at .80¢ each and B butter tarts at .50¢ each, what is the meaning of: (Show your work.)



i) $C + B$	ii) $25C$
iii) $20B$	iv) $25C + 20B$

- b) If Joanne buys D donuts at .40¢ each and P potato chips at .75¢ per bag, what is the meaning of:

i) $2D + 4P$	ii) $17P$
iii) $D/2$	iv) $12D + 10P$

## Reflection

If  $x = 1.20$  and  $y = 1.40$ , predict which of the following equations would equal the highest and lowest values.

- i)  $5x + 5y$     ii)  $10x$     iii)  $10y$     iv)  $xy$

Now, solve each equation to see if you were right.



## Drill Sheet 1

- a) If  $x = 3$  and  $y = 4$ , which expression below has the largest value?  
i)  $xy^2$     ii)  $x^2y$     iii)  $x^2 + y^2$     iv)  $x^2 - y^2$
- b) Jane and Letitia are having a number of flyers printed advertising their upcoming yard sale. The cost of printing is represented by the formula  $C = 25 + 0.05f$  ( $f$  = flyers). The number of flyers they can afford to print is limited by their budget, so they gave the printer the following chart. Fill in the chart using the above formula.
- | Number of Flyers | Total Cost |
|------------------|------------|
| 250              |            |
| 500              |            |
| 600              |            |
| 750              |            |
- c) Which number completes this pattern?  
7, 13, 10, 16, 13, 19, \_\_\_\_  
Answer: \_\_\_\_\_
- d) Simplify the following expression and choose the correct answer.  
 $(x^2 + 3x + 2) + x(2 - x)$   
i)  $x + 2$     ii)  $5x$     iii)  $5x + 2$     iv)  $2x^2 + 5x + 2$
- e) On a trip to the amusement park, Fred spends most of the day on the roller coaster rides. Each ride costs \$5. In addition to the cost of each ride, Fred pays \$12 to enter the park itself. Which equation below represents the amount of money Fred will spend to go on  $x$  rides? ( $C$  = total cost)  
i)  $C = 5x - 12$     ii)  $C = 5x + 12$     iii)  $C = 12x - 5$     iv)  $C = 12x + 5$



## Drill Sheet 2

a) Simplify fully:  $-4x(3 - 2x) + x^2$

Show Your Work

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

b) Solve these equations:

i)  $5 - (-a) = 10$

ii)  $12 + g = 24$

iii)  $t + 6.5 = 4.5 - 2.5$

iv)  $5x + 3 + 2x - 1 = 16$

c) The following pattern increases by this rule: multiply the previous term by 4 and add 1.

19, 77, 309, 1237, \_\_\_\_\_

What is the next term in the sequence?

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

d) If  $\square = 3$ , what is the value of  $21 - (5 \times \square)$ ?

Show Your Work

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



## Review A

a) Roberto gets a summer job working at Papa Pete's Greaseless Hamburger Joint. He earns \$8 per hour, plus a \$25 bonus on his first day for having first aid training. Which equation best represents Roberto's earnings (E) if h represents his hours worked?

- i)  $E = h(25 + 8)$     ii)  $E = 25h + 8$     iii)  $E = 25 + 8h$     iv)  $E = 25(h + 8)$

b) Solve the following. Show your work:

i)  $4 + x = 7$

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

ii)  $c - 3 = 9$

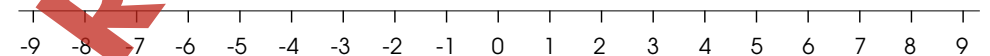
Answer: \_\_\_\_\_

c) The table below represents a pattern that increases when the same amount is added to each term. Provide the missing term values.

Term Number	1	2	3	4	5
Term Value	5	12		26	

d) Graph the letter on the accompanying number line.

$6 > x > -6$



## Review B

a) Ike's school decides to hold a carwash fundraiser for their school trip. The school spends \$40 for all the equipment needed for the carwash. They end up paying \$3 for water/supplies for each car they wash. They charge \$6 for each car washed. The formula used to calculate their earnings is  $E = 6x - (3x + 40)$  where E = Earnings and x = cars.

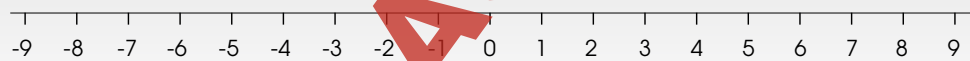
Calculate their profit if they wash 50 cars:

Show Your Work

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

b) On the number line below graph the solution to x

$-2x = -6$



c) Solve these equations showing your work:

i)  $3x + 7 = 19$

ii)  $17 - x = 4$

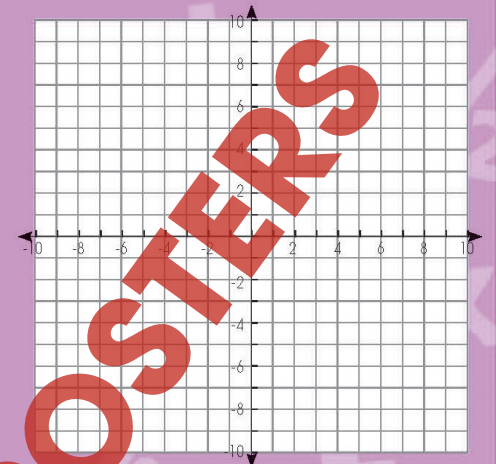
d) Simplify the following equation:

$4x^2 - 2x + 6 + 3x - x^2$

## Equations and Plotting

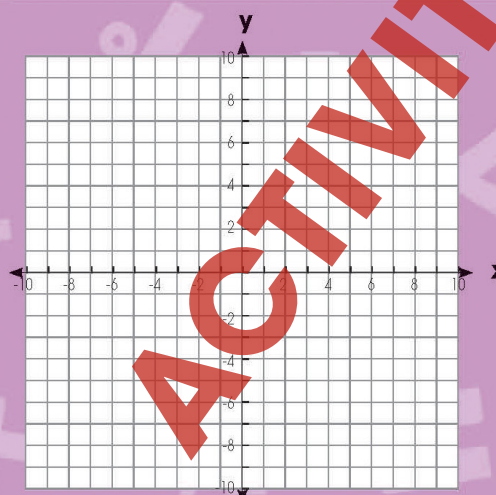
a) Plot the following coordinates on the accompanying chart:

- A =  
B =  
C =  
D =



b) Complete the chart below using the equation  $y = 2x + 2$ .

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



c) Now, plot the coordinates from the chart above on the graph below, then draw a straight line through the coordinates.

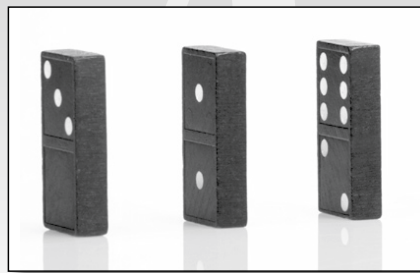
NAME: \_\_\_\_\_



# Task Sheet 3

**3a)** A pattern that increases when the same amount is added to each term is represented in the table below.

Term Number	Term Value
1	12
2	19
3	26
4	33
5	40



Which of the following is the **term number** when the **term value** is 61?

- i) 6      ii) 8      iii) 41      iv) 47

**Show Your Work**

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

**b)** Which pattern has this rule: decrease by subtracting the same amount from each term?

- i) 25, 20, 10, 5, 2.5  
 ii) 12, 24, 36, 48, 60  
 iii) 31, 28, 25, 22, 19  
 iv) 22, 19.5, 17, 14.5, 11

**Reflection**

Determine which of the following alternatives follows the rules to this pattern:  
 Multiply by 4, add 7, subtract 3 (You may use a calculator for help.)  
 i) 7, 32, 132, 532    ii) 6, 28, 114, 226    iii) 8, 36, 148, 592    iv) 9, 40, 164, 656

**3.**

a) ii) 8

b) iii) 31, 28, 25, 22, 19

9

**4.**

a) 12, 19, 26, 33, 40, 47, 54, 61

b) 12, 17, 22, 27, 32, 37, 42, 47

c) Baseball \$15  
Soccer Ball \$17  
SUM \$204

10

**5.**

a) Label from -1 to 3.

b) Label from -7 to 8.

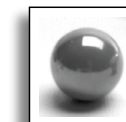
c) Label x on -2.5 and y on 7.

d) Label -6

e) Label 0

11

**6.**



4,9



6,5



3,3



8,1



1,8

12

**7.**

a) Joe's Decks and Landscaping  
 $C = 2500 + 150x$   
 $C = 2500 + 150(5)$   
 $C = 2500 + 750$   
 $C = 3250$  (Best deal)

King Street Deck Company  
 $C = 3250 + 125x$   
 $C = 3250 + 125(5)$   
 $C = 3250 + 625$   
 $C = 3875$

b) Joe's Decks and Landscaping  
 $C = 2500 + 150x$   
 $C = 2500 + 150(8)$   
 $C = 2500 + 1200$   
 $C = 3700$  (Best deal)

King Street Deck Company  
 $C = 3250 + 125x$   
 $C = 3250 + 125(8)$   
 $C = 3250 + 1000$   
 $C = 4250$

13



# EASY MARKING ANSWER KEY