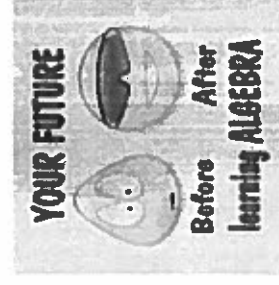




- Simplify by collecting like terms.
 - $8y + 6x - 2y + 3x$
 - $4y - 11 - 9y + 16$
 - $m^2 - 4m - 5m^2 + 12$
- Expand (multiply) then simplify.
 - $7(c + 4)$
 - $-4(p^2 - 2p + 8)$
 - $-3(x+2) - 4x$
 - $5m(m - 9)$
 - $-3m(m^2 + 3m)$
- Simplify first. THEN evaluate if $x = -2$.
 - $5x + 2x + 1$
 - $8 + 3x - 2x$
 - $2x + 11 - 4(3x + 7)$
 - $2x(x - 3) - (x + 1)$
- Solve for the unknown. YOU MUST SHOW STEPS.
 - $p - 3 = 10$
 - $2 = 5 + k$
 - $6x = 42$
 - $\frac{m}{-2} = 5$
 - $3x + 2 = 8$

- $7 - 4x = -5$
- $3x + 4x = 3x - 3$
- $-7 - 3x = 8 + 2x$
- $2(x + 1) = 4(x - 2)$



- Solve and check: $-40 = -4 + 4x$

- Shirts Plus creates shirts with logos for teams. They charge an initial amount of \$40 for the design and then \$20 per shirt.

a) Complete the table of values for 0 to 50 shirts.

#shirts	Cost (\$)	(x, y)

b) Graph the relation on a piece of graph paper.

c) State the initial value. _____

d) Determine the rate of change using your graph. **SHOW your work and UNITS!**

e) Write an equation for this relation. Define your variables.

f) Is this relationship linear or non-linear? How do you know?



g) Is this an example of direct or partial variation? How do you know?

h) Use your graph to determine how much it would cost for 35 shirts. SHOW YOUR WORK.

i) Use your equation to determine the cost for 350 shirts. SHOW YOUR WORK.

7. Monique has a job at a garden centre. She is paid \$20 per hour.

a) Write an equation to represent Monique's pay, P , after working h hours.



b) State the initial value for Monique's pay. _____

c) Is this an example of direct or partial variation? How do you know?

d) What is the rate of change for this relation?

e) Create a table of values for 0 – 6 hours.

f) Graph this relation on a piece of graph paper.

8. Eric got a job with a starting bonus of \$20 plus \$15 per hour.

a) State the initial value for Eric's earnings. _____

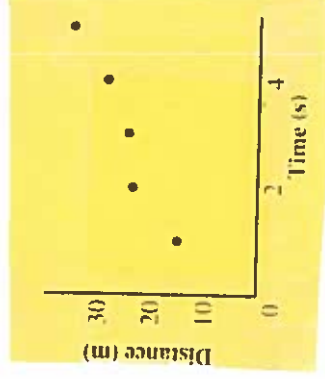
b) State the rate of change for Eric's earnings. _____

c) Write an equation to represent Eric's earnings. Define your variables.

d) Graph Eric's earnings on the same graph as Monique's (from qu. #7).

e) State the point of intersection for the two lines: _____

f) What does the point of intersection mean based on this question?



9. Examine this scatter plot to the right.

a) Should the line of best fit pass through the origin? Explain.

b) Draw the line of best fit. Use your line of best fit to determine the distance after 3 seconds.

c) Describe this correlation by circling the appropriate word(s): STRONG NEGATIVE NO WEAK POSITIVE

10. Copy and complete each table. State whether the relation is linear or non-linear.

a)

x	y	First Difference
-1	4	
0	2	
1	0	
2	-2	

b)

x	y	First Difference
-1	5	
0	9	
1	12	
2	14	