

1. Expand and simplify the following:

(a) $6y - 7h + 3y - 2h$

(b) $5(3x - 2)$

(c) $8a^2(2a - 1)$

2. Simplify the following:

(a) $2b^2 \times 3b^5$

(b) $(5x^2)^2$

(c) $\frac{h^{15}}{h^8}$

(d) $\frac{12a^4b^2}{3a^3b^5}$

3. **Factor** the following**:

(a) $10a - 5$

(b) $16a^3 - 32a$

(c) $20x^4y^5 + 10x^5y^3$

4. **Solve** each of the following equations:

(a) $4x = -96$

(b) $z + 11 = 9$

(c) $-3b = 18$

(d) $4x - 6 = 3x + 3$

(e) $6p + 5 = 23 - 2p$

(f) $\frac{12}{x} = \frac{8}{6}$

(g) $\frac{k-9}{3} = \frac{3k+1}{2}$

5. In her pocket, Celia has \$24 less than the amount in her bank account. The sum of the money in her bank account and in her pocket is \$86. How much money does Celia have in (a) her pocket and (b) in her bank account?

6. State the slope and y-intercept of the line $2y = -20x + 8$

7. Find the x- and y- intercepts of the line $4x - 6y + 24 = 0$

8. Write the equation of a line passing through (2,-1) and (0,7)

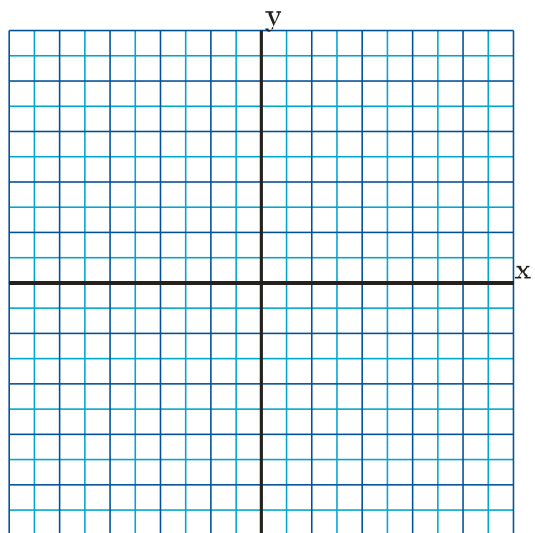
9. On the graph paper provided, plot the following lines. Be sure to label each line with its defining equations.

(a) $y = \frac{-2}{5}x$

(b) $y = 5x - 3$

(c) $y = -8$

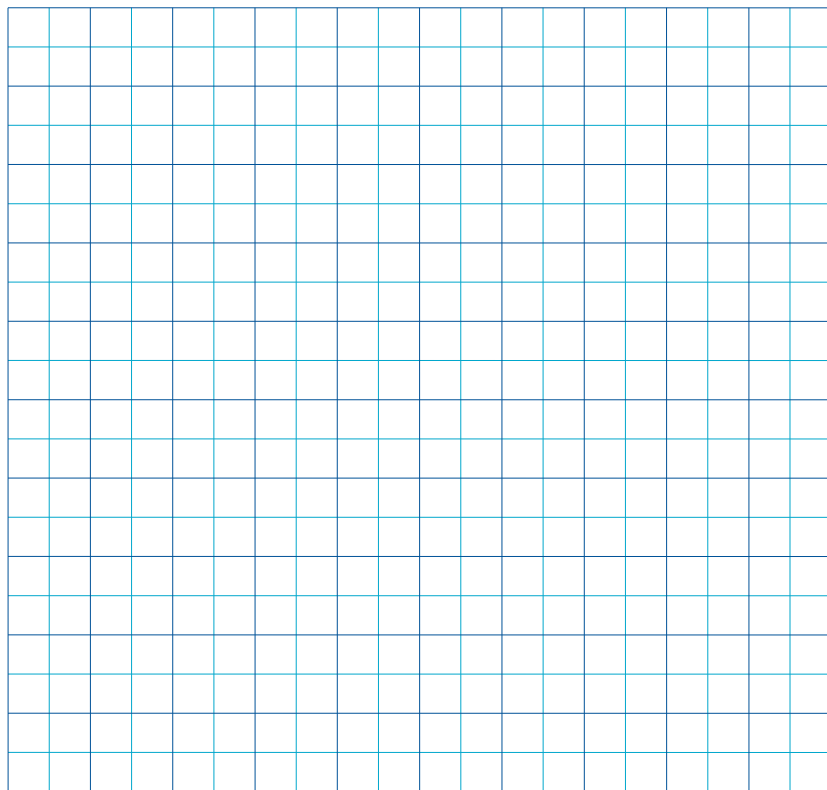
(d) $x = -7$



10. Use the data in the table to answer the following questions. Read all the questions before starting this problem.

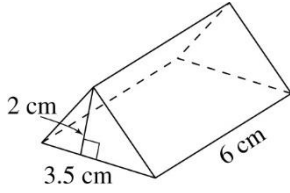
Distance (m)	0	5	12	16	18	24	29
Time (s)	0	1	2	3	4	5	6

- (a) Determine a scale and plot the ordered pairs on a graph and draw a **line of best fit**. (Graph paper included)
- (b) Find the equation (of the line of best fit) that defines this relationship
- (c) State the slope and the y intercept, and interpret the meaning of both in this situation.

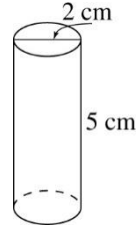


11. Calculate the Volume of each of the following shapes.

(a)

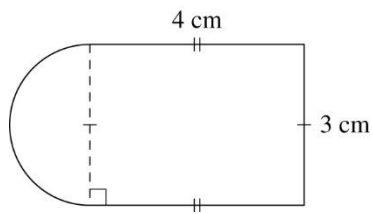


(b)

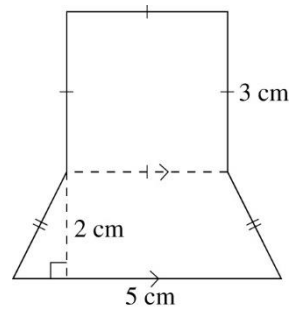


12. Find the **perimeter** and **area** of each figure. Give your answer to the nearest tenth. Show all your work

(a)

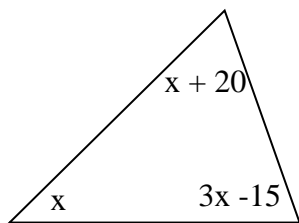


(b)



13. Solve for unknown in the following: (app – 6 marks)

(a)



(b)

