

Do you remember this?



Grade 10 Prerequisite Skills Review

1. Simplify the following expressions:

a) $3x + 2(1 - x)$

b) $2y - (5 - y)$

c) $2(x + 3) + 4(x + 2)$

d) $2a(a - 3) - 2(4 + a)$

2. Solve the following equations:

a) $3x + 1 = 22$

b) $4d - 3 = -15$

c) $\frac{m}{4} - 1 = 2$

d) $2(y + 3) = 5$

e) $4x - 2 = 2x + 1$

f) $\frac{t-1}{3} = 5 - t$

g) $\frac{2y+1}{3} = \frac{y-1}{2}$

h) $2(x - 7) + 3(x + 1) = -1$

3. Find the x and y intercepts:

a) $x + y = 7$

b) $x - y = 4$

c) $2x + y = 8$

d) $3x - 2y - 6 = 0$

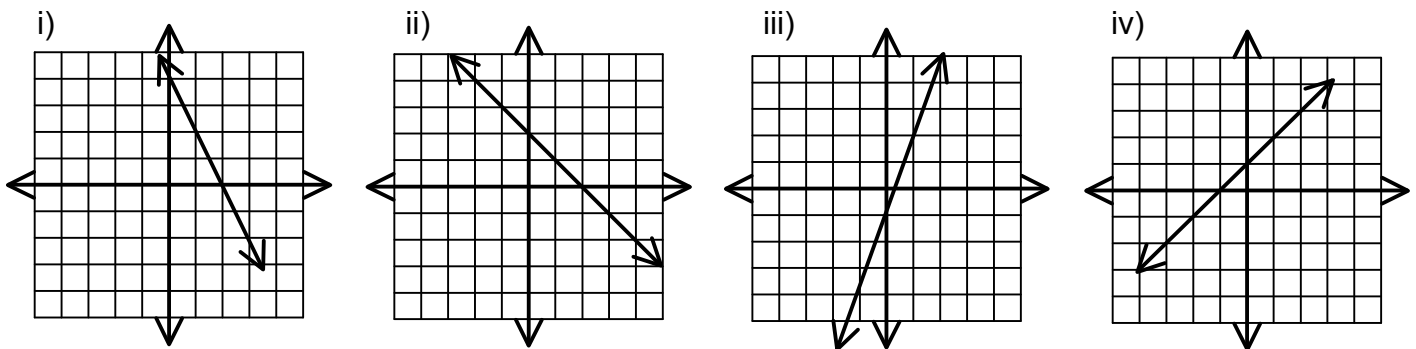
4. Match the following equations to the graphs below:

a) $y = 3x - 1$

b) $y = -x + 2$

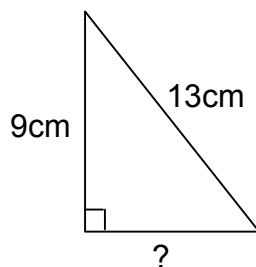
c) $2x + y - 4 = 0$

d) $x - y + 1 = 0$

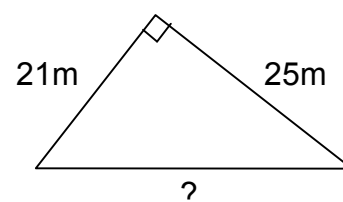


Find the unknown side lengths in the following right triangles:

a)



b)



5. The slope of a vertical line is _____. The slope of a horizontal line is _____.

6. Write equations for line with the following conditions:

a) Vertical line passing through (-3,4)

b) Horizontal line passing through (1,5)

7. Find the slope of the line passing through each of the following ordered pairs:

a) (0,0) & (-1,-3)

b) (0,4) & (2,0)

c) (-6,-1) & (-4,-6)

8. Simplify, using exponent rules:

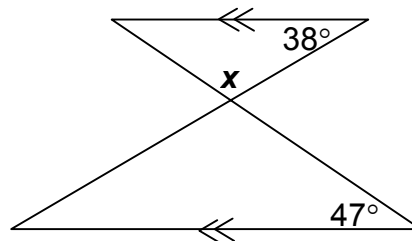
a) $a^3 \times a^4$

b) $\frac{a^5 b^3}{a^2 b}$

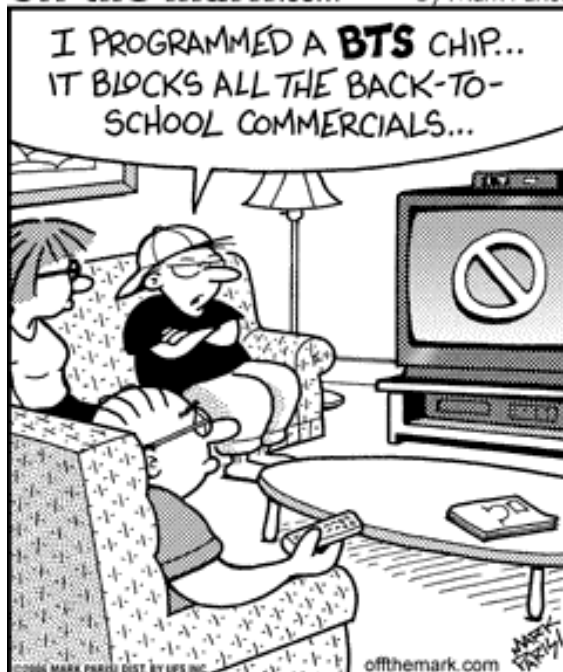
c) $(2x^2)^3$

d) $(-4m^4 n)(-3m^3 n^3) \div (6m^2 n^2)$

9. Find the missing angle measure, 'x':



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Answers:

- a) $x+2$ b) $3y-5$ c) $6x+14$ d) $2a^2-8a-8$
- a) $x=7$ b) $d=-3$ c) $m=12$ d) $y=-1/2$
e) $x=3/2$ f) $t=4$ g) $y=-5$ h) $x=2$
- x-int a) (7,0) b) (4,0) c) (4,0) d) (2,0)
y-int (0,7) (0,-4) (0,8) (0,-3)
- a ↔ iii b ↔ ii c ↔ i d ↔ iv
- a) 9.38 cm b) 32.65 m
- a) undefined b) 0
- a) $x=-3$ b) $y=5$
- a) 3 b) -2 c) -5/2
- a) a^7 b) $a^3 b^2$ c) $8x^6$ d) $2m^5 n^2$
- $x=95^\circ$