1. 9 + (12 ÷ 6)2+ (2 × –9) –5 =
   9 + (2)^2 + (-18) -5 =
   9 + 4 + (-18) -5 = -10

2. (28 + 7)/ -7 (5-6)^2 – 1 =
   (28 + 7) / -7 – 1 =
   28/-7 + 7/-7 - 1 =
   - 4 - 1 – 1 = - 6

3. ((4 + 3) × 4) –5 + ((7 –4)2/ 3) + 1 =
   (7 * 4) – 5 + 3^2/3 +1 =
   28 – 5 + 3 +1 = 27

4. 38.63 + 14.2 = 52.83
   230 * 2.465 = 566.950
   13.2/4.8 = 2.8

5. Solve for the subject in (): Y = mx + c (m)

m= (Y – c)/x

6. y/P + a = b
   y/P = b – a
   y/b - a = P(b – a)/b – a
   y/(b-a) = P

7. Solve for the subject in ():2(x + 3) –3(y + 2) = 4xy (x)

2x + 6 – 3y – 6 = 4yx
2x – 3y = 4yx
2x - 4yx = 3y
(2 – 4y)x = 3y
x = 3y/(2 – 4y)

8. s = uf + 1/2at^2
   s – uf = 1/2at^2
   2s – 2uf = at^2
   (2s – 2uf)/a = t^2

$$\frac{\sqrt{2s - 2uf}}{a} = t$$

9. A student worked 3.5 hours on Friday evening, 5 hours on Saturday and 6.5 hours on Sunday. How much will they earn if they are paid $12.50 per hour?

   (3.5 + 6.5 + 5) * 12.50 =
   15 * 12.50 = 187.5

   The student will earn $187.50.

10. 5.5 brown used 3.25
    7.75 maroon
    (5.5 + 7.75) – 3.25 = 10.00

    George has 10.00 yards left

11. The Miller family estimate that they spend $475 a month on food. This amount represents 12% of their total budget. What is the amount of their total budget?

    475 / 12% = 3958.33

    Their total budget is $3958.33.

12. Budget = 18000.00
    Shrubs = 9% of budget
    (18000 * 0.09) = 1620
    $1620.00 of the budget was used on shrubs and flowers

13. A store clerk sold a pair of skies to a customer. The skies had a retail price of $219.95. The clerk made up a sales slip that included 15% HST. What is the final amount paid?

    15% * 219.95 = 32.99
    219.95 + 32.99 = 252.94

    The Final amount paid is $252.94.

14. 2.6 ppm to 2.9 ppm percent increase
    (2.9 – 2.6)/2.6 = 0.11538 * 100
    = 11.5%

    Percent increase is 11.5%

15. Your company has a large container of fuel. You have used 320 gallons of the 1600 total gallons. What percentage of the fuel remains?

    (1600 – 320) / 1600 =
    1280 / 1600 = 0.8

    80% of the fuel remains.

16. Safety Harness (HST included) = 345.00
    345.00/1.15 = 300
    345.00 – 300.00 = 45.00

    Actual cost of Harness is $300.00 and the tax on the item is $45.00

17. If the price of a tester decreased from $60 to $36, What is the percent decrease in the cost?

(60 – 36) / 60 =
24 / 60 = 0.4

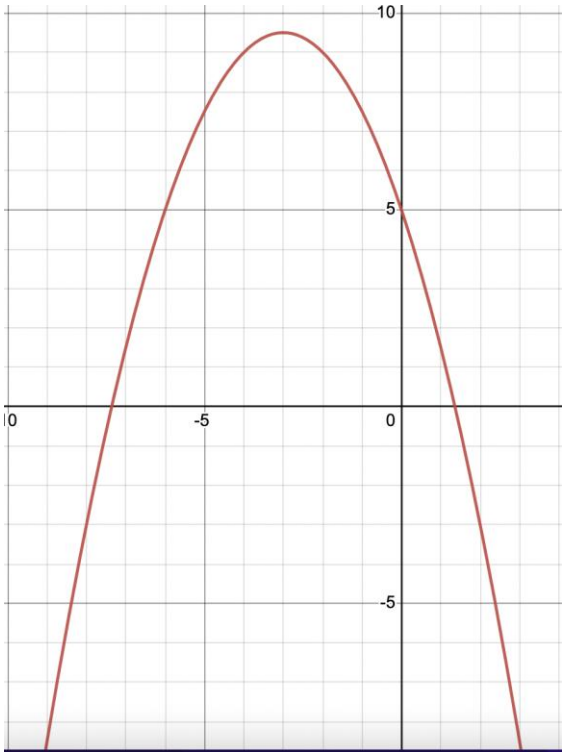
There is a percent decrease of 40%

18. 224.96 (25% off)
224.96 * (1.25) = 281.2 -> 280.95 Original Price
224.96 * (1.15) = 258.70

The original price of the camera is $ 280.95. The customer will pay $258.70 for the camera.

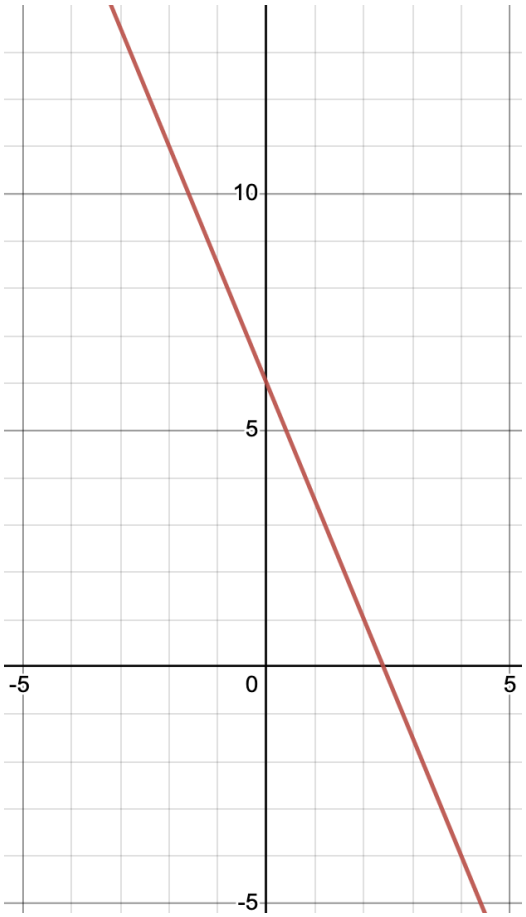
19. Graph each of the following functions. Use a table like the one provided.
y = -.5x2-3x + 5

X	Y
-2	9
-1	7.5
0	5
1	1.5
2	-3



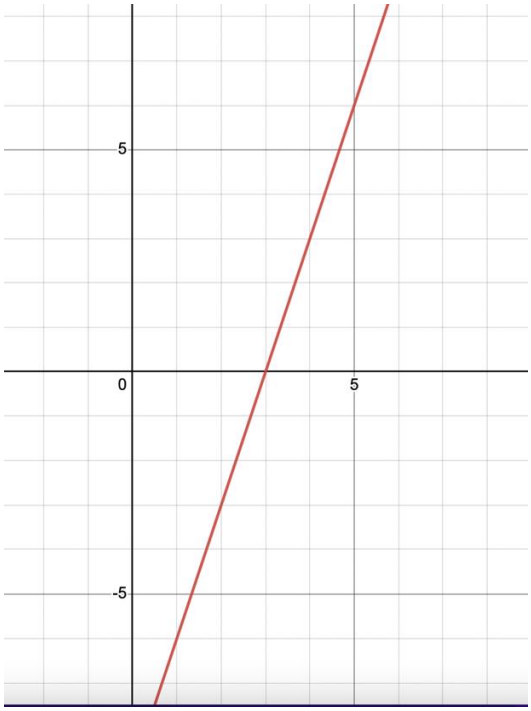
y = (-5/2)x + 6

X	Y
-3	13.5
-2	11
-1	8.5
0	6
1	3.5
2	1
3	-1.5



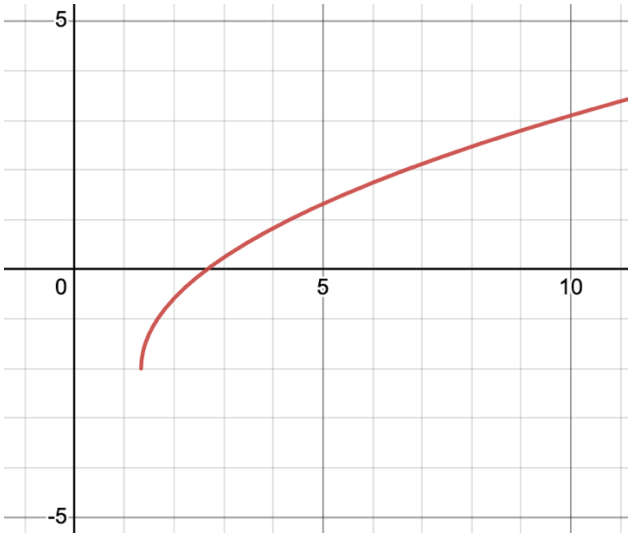
y = 3x –9

X	Y
-2	-15
-1	-12
0	-9
1	-6
2	-3



$$y = \sqrt{3x - 4} - 2$$

X	Y
-2	und
0	und
2	-0.59
4	0.83
6	1.74
8	2.47
10	3.10



20.

a. math.ciel() rounds a number upward to its nearest integer.
   Example: Calculating interest on a loan but the bank wants to round to the nearest dollar, so they won't lose money.

b. math.floor() rounds a number downward to its nearest integer.
   Example: If you are calculating the average of a population and you get a decimal answer, you need to round down because you cannot have half a person.

c. math.prod() is used to calculate the product of all the variables given in a list.
   Example: If you need to find the total items sold over a number of days.

d. math.perm() is used to find the number of ways to choose k objects from n objects. Example: A phone company wants to determine the number of unique phone numbers it can issue.

e. math.trunc() returns the truncated integer part of a number. Example: Is used in Computing when division is done and the answer must be an integer.