

5.2: Write Linear Equations in Slope – intercept form

Goals: *Write an equation in slope – intercept form given slope and one point
 *Write an equation in slope – intercept form given two points
 *Write an equation in slope – intercept form given two function values

Situation 1: Write the equation of a line in slope – intercept form given the slope and one point:

1. _____

Ex: slope: -4 , passes through $(-1, 3)$

2. _____

3. _____

Write the equation of the line with the given slope that passes through the given point.

Ex: $(6, 3)$, slope = 2

Ex: $(6, 3)$ slope: -2

Situation 2: write the equation of the line in slope – intercept form that passes through the given points:

1. _____

Ex: $(-2, 5)$ $(2, -1)$

2. _____

3. _____

4. _____

Write the equation of the line in slope – intercept form that passes through the given points:

Ex: $(3, 0)$ $(2, -4)$

Ex: $(-1, -11)$ $(4, 4)$

Ex: $(4, 9)$ and $(-4, -7)$

Ex: $(-2, 10)$ and $(4, -2)$

Ex: $(2, 8)$ and $(4, -2)$

Ex: Your gym membership costs \$33 per month after an initial membership fee. You paid a total of \$228 after 6 months.

a) Identify x and y . (Remember that variables must stand for things that are unknown and can change.
 x : y :

b) Find the initial membership fee.

c) Write an equation for the total cost as a function of the number attended.

d) Use your equation to find the total cost for 9 months.

Ex: In BMX racing, racers purchase a one-year membership to a track. They also pay an entry fee for each race at that track. One racer paid a total of \$125 for 5 races. Each race costs \$15.

a) Identify x and y .

x : y :

b) How much does the membership fee cost?

c) Write an equation to find the total cost for any number of races.

d) How much would it cost to race 8 times?

Ex: You earn money in the winter by shoveling snow for neighbors. You get paid by the hour and also get an upfront fee from each neighbor. Last storm you worked for 3 hours and earned \$26. Another time you worked for 8 hours and earned \$61.

- a) Identify x and y . (Remember that variables must represent things you don't know and can change)

x :

y :

- b) Set up two ordered pairs (x, y) using information from the problem.

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- c) Find the rate per hour

- d) Find the upfront fee

- e) Write an equation to represent the total amount of money you would make for any number of hours worked.

- f) Using your equation determine how much you would get paid if you shoveled for 5 hours.