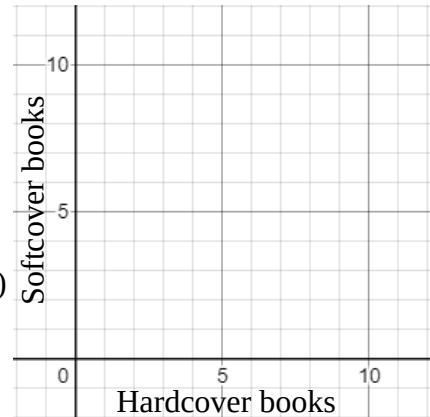


## Other Forms of Linear Equations Practice

1. At a book fair, hardcover books cost \$12 and softcover books cost \$6. Chelsea has saved up \$60 to spend on books, and plans to spend all her money at the book fair.

- a. Determine the possible combinations of books Chelsea can buy. Graph the points on the grid shown.



- b. Write an equation that relates the number of hardcover ( $x$ ) and softcover ( $y$ ) books purchased to the total amount of money Madalyn has.

- c. Re-write your equation from (b) in slope-y-intercept form.

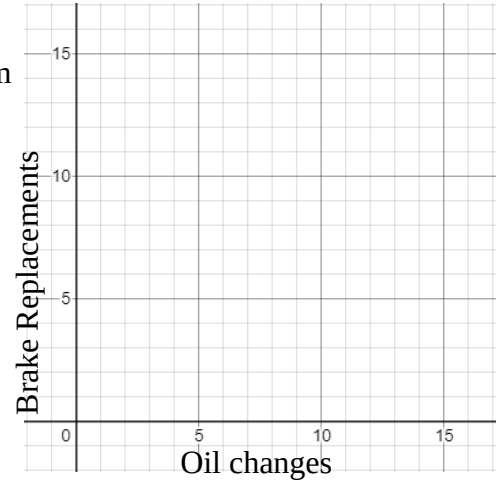
2. Convert each equation to slope-y-intercept form. Verify your work in Desmos.

a)  $x + 2y + 30 = 0$

b)  $10x - 5y - 35 = 0$

3. At an Auto Shop, it takes a mechanic 30 minutes to run an oil change, and it takes 45 minutes to replace brake pads. The mechanic typically works  $7\frac{1}{2}$  hours per day, and tries to keep their schedule full.

- a. Determine the possible combinations of oil changes and brake pad replacements the mechanic can perform in a day.



- b. Write an equation that relates the number of oil changes ( $x$ ) and brake replacements ( $y$ ) performed to the amount of time in the work day.

- c. Re-write your equation from (b) in slope- $y$ -intercept form. Verify with Desmos.