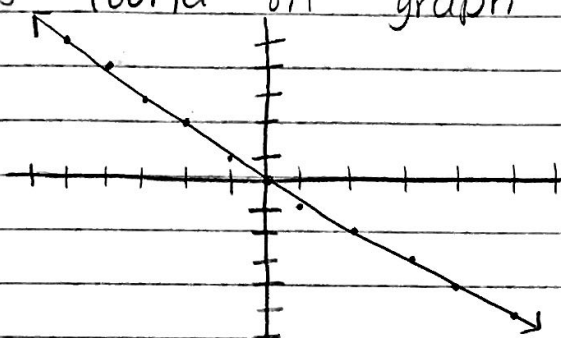


1. A man measured the height (h) of ice on his pond each week (n) during a thaw. The equation he used is represented by: $h = 59 - 7n$

n	h
1	52
2	45
3	38
4	31

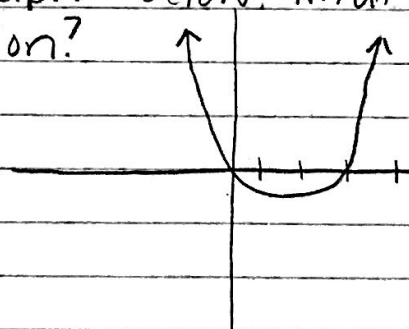
Draw a table to represent the relationship between the height of ice (h) each week (n) during first 4 weeks.

2. Make a table that contains coordinates of 3 points found on graph below.



3. Using the graph below, what is the solution set for the function?

$(0, 0)$
 $(4, 0)$



4. Draw a graph/function that contains imaginary roots.

5. If the roots of a quadratic equation are 0 and -5 , write an equation to satisfy these conditions.

6. Solve $x^2 + 20x - 7 = 0$ by completing the square. What number goes in blank (added to both sides)?

$$x^2 + 20x + \underline{100} = 10 + 100$$

7. Consider solving $x^2 + 20x - 10 = 0$ by completing the square, what is the equation you will get?

$$x^2 + 20x + 100 = 90$$

$$(x+10)^2 = 90$$

8. What should be added to both sides of the equation to complete the square for $x^2 + 8x = -4$

$$+16$$

9. If $\frac{2}{3} = \frac{x-7}{x+5}$, what value does x equal?

$$\begin{array}{r} 2x+10 = 3x-21 \\ -2x \quad -21 \quad -10 \quad -21 \\ \hline 31 = x \end{array}$$

10. Danae and Jeremy do 5 hours of chores every week. Danae gets paid \$6 per hour for any extra chores she does each week. Jeremy's parents pay him two dollars less, but gives him \$15 at the start of each week. The table below shows their relationship between hours and amount of chores complete.

# of hours	D	J
5	0	15
6	6	19
10	30	35
12	42	43
15	60	55
20	90	75

a. How many hours will Danae have to work before she catches Jeremy? Explain.

b. How much will Jeremy have made when Danae catches his pay? Explain.

11. Solve $\frac{-10}{x-7} = 5$

$$x = 5$$

12. Use the complete the square method for:
 $x-6)^2=7$ $x^2-12x+29=0$

13. Solve, using any method.

a. $x^2+3x-28=0$ $x=7, -4$

b. $x^2+5x+4=0$ $x=1, 4$

14. Find roots, using any method.

a. $x^2-8x-36=0$ $x=-12, 4$

b. $2x^2-x-21=0$ $x=7/2, -3$

15. Solve $\frac{12}{x-3} = \frac{8}{x}$ $x=-6$

16. Put $y=(3x+1)(x-9)$ into standard form.

$y=3x^2-26x-9$