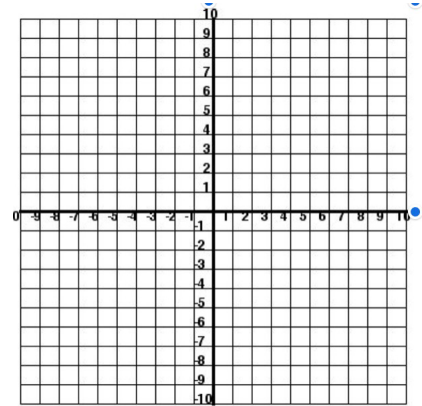


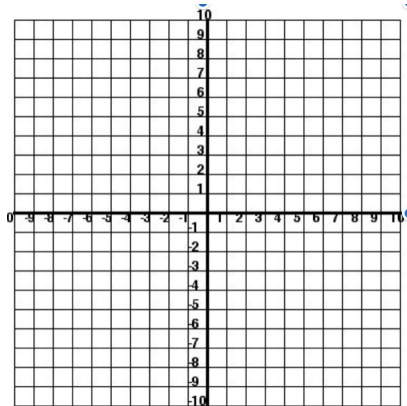
This packet starts our work on Unit 5. Measurement and Geometry while finishing our graphing and Functions Unit.

1. Graph the function: $f(x) = x^2 - 6x + 4$. Using the following table.

6	
4	
2	
0	
-2	
-4	

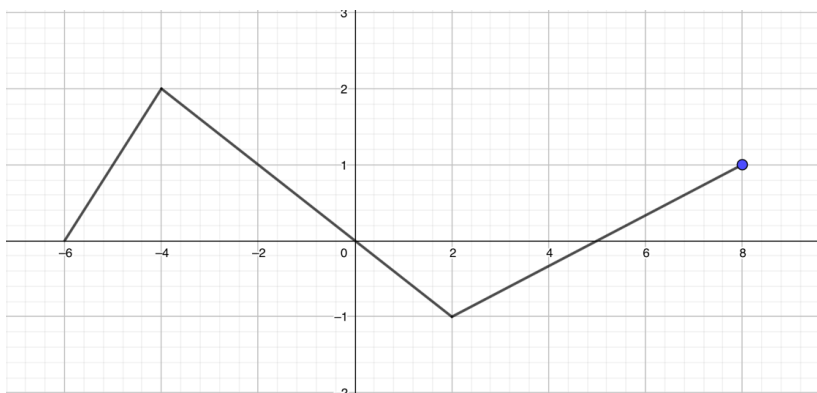


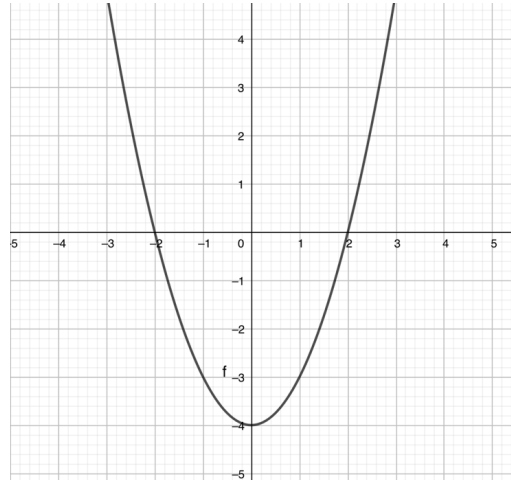
2. Graph the following function $f(x) = x^3 + x^2 - x - 2$ using a Domain of $\{-3, -2, -1, 0, 1, 2\}$.
Domain = (x values)



3. From this graph estimate the missing values of the ordered pairs.

$(0, \underline{\hspace{1cm}})$, $(\underline{\hspace{1cm}}, 6)$, $(\underline{\hspace{1cm}}, 1)$, $(-3, \underline{\hspace{1cm}})$, $(\underline{\hspace{1cm}}, 2)$, $(-1, \underline{\hspace{1cm}})$, $(5, \underline{\hspace{1cm}})$, $(\underline{\hspace{1cm}}, -1)$



Analyze Graphs

1. What is this graph's y-intercept? _____. What is the x-intercept? _____
2. For Day 11 graphs and only the domains shown/given, what are the ranges?

Graph 1	Range = { _____ }
Graph 2	Range = { _____ }
Graph 3	Range = { _____ }

3. What is the function of the graph above called? _____.
4. What is the function from the Day 11, problem 2 called? _____
5. The graph for Day 11, Problem 3 depicts neither a quadratic nor a cubic function. Is it still considered a function? _____. How do you know?

Unit Conversion within a system

As we approach unit conversions we need to understand what a **conversion factor** is and does. A conversion factor is a value that you **multiply** your starting value by to get your desired units.

Ex: How many yards are in 28 feet?

Starting value * conversion factor = answer

28 feet * 0.333 = 9.34 yards. (0.3333 is the conversion factor because there are 3 feet in 1 yard— $1/3 = 0.3333$)

Complete the table

Start Value	Conversion factor	Answer
191 inches		_____ yards
42.3 miles		_____ yards
5280 feet	1/5280	_____ miles
1.6 miles		_____ yards
11 mins	60	_____ seconds
530 days		_____ years
100 hours		_____ days
7.5 hours		_____ days
180 days		_____ hours

Staying within our US Standard System**Complete the Table**

Volume		
Start Value	Conversion Factor	Answer Units
2.5 gallons		_____ Quarts
2.5 gallons		_____ pints
2.5 gallons		_____ ounces
7 quarts		_____ ounces
452 pints		_____ gallons
452 pints		_____ cups
1000 cups		_____ gallons
1000 cups	x 8	_____ fluid oz
2.5 tablespoons	x 2	_____ fluid oz

Weight		
Start Value	Conversion Factor	Answer Units
2.5 lbs		_____ ounces
2.5 tons		_____ pounds
2500 pounds		_____ ounces
2500 pounds		_____ tons
42 ounces		_____ pounds
42000 ounces		_____ tons

Metric Conversions

The metric system is a base 10 system center as the fact that the unit measurement for all these weight, volume and length is all 1

1 cubic centimeter of pure water = 1 milliliter of water = 1 gram of water

Being base 10 all conversion factors are powers of 10.

Complete the table

Start Value	Conversion Factor	Answer Units
12345 ml		_____ l
47 cm		_____ m
852 g		_____ Kg
47 dl		_____ l
297 mm		_____ cm
47 cg		_____ g
4700 mg		_____ g
1234.5 m		_____ km
47 ml		_____ cl
2000 ml		_____ l