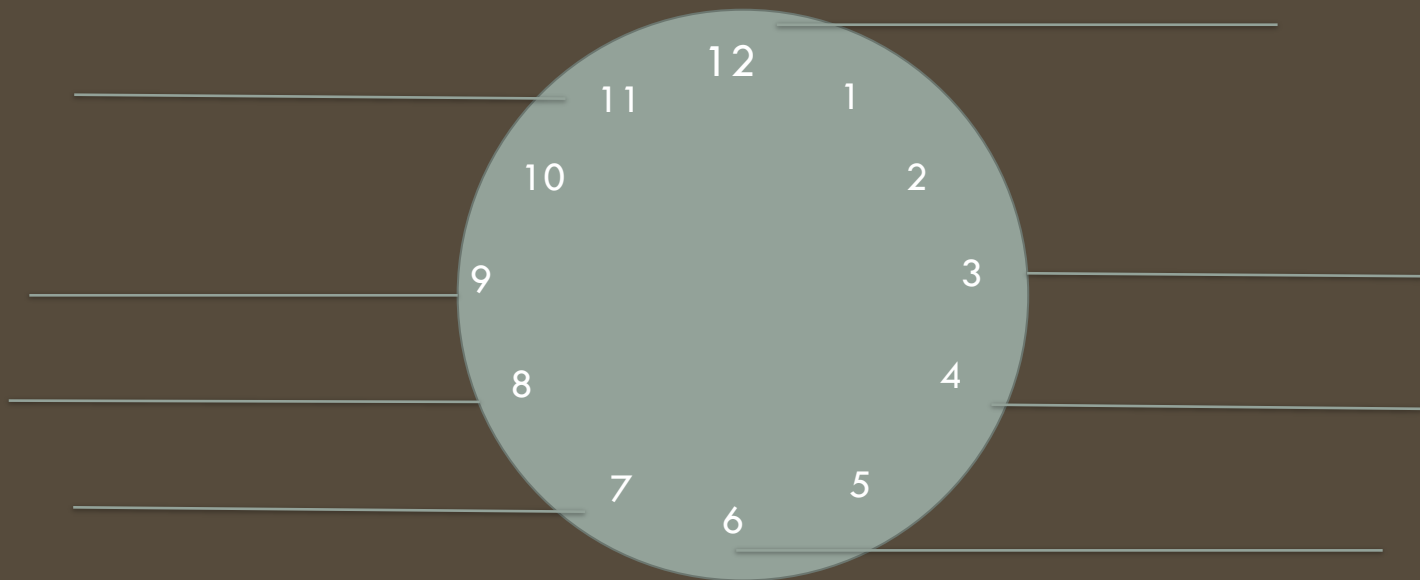




## UNIT 2 REVIEW

**On your paper draw a clock with blanks at the same numbers as shown below.**

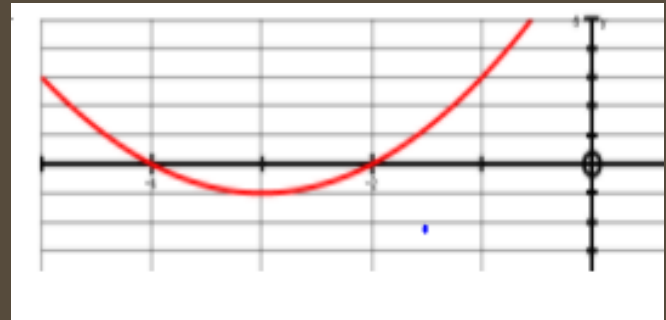


## 12:00 Appointment

Name the following important information.

$$y = x^2 + 6x + 8$$

Vertex:                      Min/Max  
Axis of Symmetry/Line of Symmetry  
x =



y-intercept:

use

x-intercepts:

X-intercept Form

Desmos

## 3:00 Appointment

Find the answer of each problem.

$$1. \cancel{(2x^4 + 3x^2 - 5)} + (10 - \cancel{3x^2} + \cancel{5x^4}) = 7x^4 + 5$$

$$2. (\cancel{x^3} + 2\cancel{x^2}) - (\cancel{3x^3} + 2\cancel{x^2}) = -2x^3 + 4x^2$$

$$3. \overbrace{(x+4)(2x^2-x+1)} \\ \cancel{2x^3 - x^2 + 1x + 8x^2 - 4x + 4} = 2x^3 + 7x^2 - 3x + 4$$

## 4:00 Appointment

Using the function  $y = -(x + 5)^2 - 5$  determine the following information.

Vertex:  $(-5, -5)$  Min/max **max**

a.o.s./line of symmetry:  $x = -5$

y-intercept:

x-intercepts:

x-intercept form:

Find in Desmos

## 6:00 Appointment

Factor

1.  $x^2 + 9x + 20$

$$(x+4)(x+5)$$

3.  $3x^4 + 8x + 4$

Prime

2.  $2x^3 + 32x^2 + 128x$

$$2x(x^2 + 16x + 64)$$

$$2x(x+8)(x+8)$$

4.  $m^3 - m^2 + 2m - 2$

$$m^2(m-1) + 2(m-1)$$

$$(m^2 + 2)(m-1)$$

## 7:00 Appointment

Solve.

$$1.) x^2 + 7x = 0$$

$$x(x+7) = 0$$

$$x = -7, 0$$

$$2.) 4x^2 - 36 = 0$$

$$4(x^2 - 9)$$

$$4(x-3)(x+3)$$

$$x = \pm 3$$

$$x = -1/3, 3/2$$

$$3.) 6x^2 - 7x = 3$$

$$6x^2 - 7x - 3 = 0$$

$$x^2 - 7x - 18$$

$$(x - \underset{6}{9})(x + \underset{6}{2})$$

$$(x - \frac{3}{2})(x + \frac{1}{3})$$

$$(2x - 3)(3x + 1)$$

## 8:00 Appointment

Find the area of the rectangle.

$2x^2 + 3x + 1 (x+5)$

$x + 5$

$+$

$2x^3 + 3x^2 + x$   
 $+ 10x^2 + 15x + 5$

$= 2x^3 + 13x^2 + 16x + 5$



## 9:00 Appointment

Write an quadratic function in **x-intercept form** whose graph has the following properties.

$$x(x+5) + 2 = y$$

x-intercepts: (0, 0) and (-5, 0) and a point at (-2, -4)

**Vertex Form:**

$$(x+2.5)^2 - 4.25 = y$$

## 11:00 Appointment

A rectangle has a length of  $x$  inches and a width of 5 inches less than the length. If the dimensions were doubled, find the area of the new rectangle in terms of  $x$ .

