Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CW:\_\_\_\_\_\_\_\_\_\_HW:\_\_\_\_\_\_\_\_\_

Unit 6: Trigonometry Part 2

AFM Fall 2017

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| --- | --- | --- | --- | --- |
| **Date** | **Day** | **Topics Covered** | **Classwork** | **Assignments** |
| Tuesday 11/28 | 1 | Trig Functions of Any Angle | PracticeWorksheet | 92% | 84% | 76% | 68% | 60% |
| Day 1 Homework |
| Wednesday 11/29 | 2 | Area of a Triangle | Practice Worksheet | 92% | 84% | 76% | 68% | 60% |
| Day 2 Homework |
| Thursday 11/30 | 3 | Graphing Sine and Cosine  | Practice Worksheet | 92% | 84% | 76% | 68% | 60% |
|  |
| Friday 12/1 | 4 | Review  | Quiz  | 92% | 84% | 76% | 68% | 60% |
| Day 4 Homework |
| Monday 12/4 | 5 | Graphing Secant and Cosecant  | **Practice Worksheet** | 92% | 84% | 76% | 68% | 60% |
| Day 5 Homework |
| Tuesday 12/5 | 6 | Equations of Graphs | Practice Worksheet | 92% | 84% | 76% | 68% | 60% |
| Day 6 Homework |
| Wednesday12/6 | 7 | Trigonometric Regression | Practice Worksheet | 92% | 84% | 76% | 68% | 60% |
| Day 7 Homework |
| Thursday12/7 | 8 | Application Problems | Practice Worksheet | 92% | 84% | 76% | 68% | 60% |
| Day 8 Homework |
| Friday12/8 | 9 | Review | **Study Guide** | 92% | 84% | 76% | 68% | 60% |
| Day 9 Homework |
| Monday 12/11 | 10 | **Test** |  | 92% | 84% | 76% | 68% | 60% |
| Finish Review |

**Lesson 1 Homework**

**Unit 6 – Trigonometry Part 2**

1. Given (-4, 3) is a point on the terminal side of angle θ. Find the exact value of the six trig functions.

2. Evaluate each trig function at the quadrantal angle or state that it is undefined.

 a. cosπ b. cscπ

3. Find the exact value of each of the remaining trig functions of θ.

 a. cos θ = -3/5, θ = quadrant III b. tan θ = -2/3 sin θ>0

4. Use reference angles to find the exact value. DO NOT USE A CALCULATOR!

 a. cos 225⁰ b. sec240⁰

**Lesson 2 Homework**

1. Find the area of each triangle below.

 a. b.

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 c. d.

2. A painter needs to cover a triangular region 75 m by 68 m by 85 m. A can of paint covers 75 m2 of area. How many cans (round to the next higher number) of paint will be needed?

**Lesson 4 Homework \***Homework based on Periodic functions

Determine the amplitude and period of each function. Then graph one period of the function.

1. y = sin 2x 2. y = -4cos(½x) 3. y = -3 sin 2x

Determine the amplitude, period, and phase shift of each function. Then graph one period of the function.

1. y = sin(x – π) 2. y = cos (2πx + 8π)

**Lesson 5 Homework**

Graph two periods of each of the given functions.

1. y = 3 csc x 2. y = 2 sec x 3. y = sec (x/3)

 4. y = csc (x – π) 5. y = -(3/2) sec πx 6. y = csc (x – π/2)

**Lesson 7 Homework**

Give the amplitude and period of each function graphed below. Then write an equation of each graph.



**Lesson 8**

1. Find a sine equation that fits these points: (0, 0), (1, 1), (2, 2), (3, 1), and (4, 0)

2. Find a sine equation that models the following data:



**Lesson 9**

1. Lilly is planting a triangular rose garden. The lengths of two sides of the plot are 8 feet and 12 feet, and the angle between them is 87°. Find the area of the garden.

2. If the vertex angle of an isosceles triangle measures 30° and each leg measures 4, find the area of the triangle.

3. Consider the table below which shows the mean monthly maximum temperature for Cape Town, South Africa. Find a sine model for the data.



4. The population of water buffalo is given by $P\left(t\right)= 400+250sin⁡(90t)$ where t is the number of years since the first estimate was made.

a. What was the initial estimate?

b. What was the population size after 6 months? after 2 years?

c. Find P(1). What is the significance of this value?

d. Find the smallest population size and when it first occurred.

e. Find the first time when the herd exceeded 500.