**Trigonometry**

1. Find the other 5 trig ratios for θ if for .

1. Find the exact value of
2. Determine the reference angle for
3. Convert 2.1 radians to degrees
4. Sketch
5. A vertical wheel with radius 50 cm rotates about an axle that is 60 cm above the ground. A marker is placed at the top of the wheel. The wheel completes one rotation every 4 s.

**a)** For the graph of the cosine function, identify the: period; phase shift; equation of the centre line; and amplitude.

**b)** Write an equation of a cosine function that models the motion of the wheel.

1. An arc with length 2 cm is marked on the circumference of a circle with radius 3 cm. To the nearest tenth of a radian, determine the measure of the central angle subtended by the arc.
2. Solve over .

1. Prove
2. Prove
3. Solve .
4. Prove .
5. Solve for

**Exponents and Logarithms**

1. Sketch a graph of

a)  b) 

2. Use transformations to sketch the graph of

Determine the equation of the asymptote.

3. Exponential form Logarithm form

a)  \_\_\_\_\_\_\_\_\_\_\_\_\_

b) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 

c)  \_\_\_\_\_\_\_\_\_\_\_\_\_

d) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 

**Laws of Logs**









**Change of Base Law** 

4. Evaluate 

5. Write as a single logarithm: 

6. Estimate, then use your calculator to determine the value of .

7. Solve:

  2. 

8. Solve:

a) 

b)



c) Determine the time in years it will take an investment of $500 to double when it is invested in an account that pays 2.5% annual interest, compounded semi-annually.

**Polynomials**

1. Use long division to divide by
2. Use synthetic division to divide by
3. Find the remainder when is divided by
4. Factor 0

1. Sketch the graph of the following functions. Label all intercepts.

a) b)

1. Sketch the graph of . Label all intercepts.
2. State the equation of any asymptotes and the coordinates of any holes

 b) c)

1. Graph the following functions. State the equations of any asymptotes, coordinates of any holes and all intercepts.