**Math 30-1 Trigonometry 4.3 and 4.4 Review**

1. If the length of the hour hand on the clock is 12 cm, what distance, to the nearest tenth of a cm, must the tip of the hour hand travel for the time to read 2 o’clock?
2. On the unit circle, if the point lies on the terminal arm of an angle in standard position, what are the exact values of the 6 trigonometric ratios?
3. If  and , determine the exact value for the other 5 trig ratios.
4. Determine the value of each of the following ratios. Give the exact ratio when possible. Round approximate values to 4 decimal places.

 a)  b)  c) 

d)  e)  f) 

1. Express each quantity as the same trigonometric ratio using its reference angle. For example, cos 160 = −cos 20.

**a)** sin 230 **b)** cos 310 **c)** tan 100

1. Determine the value of each of the following ratios. Give the exact ratio when possible. Round approximate values to 4 decimal places.

 a)  b)  c) 

 d)  e)  f) 

1. Solve each of the following equations given the domain .

 a)  b)  c) 

d)  e)  f) 

1. Solve each of the following equations given the domain .

 a)  b)  c) 

d)  is undefined e)  f) 

1. If , where , determine the largest positive value of , to the nearest tenth.
2. Algebraically determine the exact solutions for , where .
3. Consider the equation .

a) Algebraically determine the exact solutions where  .

b) Write the expression for the general solutions where .

1. Determine the exact roots of each equation algebraically over the given domain.

a)  b) 

  

c)  d) 

  approximate roots 