1. Memorize the value of the six trig functions at $0, \frac{\pi}{6}, \frac{\pi}{4}, \frac{\pi}{3}, \frac{\pi}{2}$.

2. Memorize the following trig identity formulas:

$$\sin^2 \theta + \cos^2 \theta = 1$$
$$1 + \tan^2 \theta = \sec^2 \theta$$
$$1 + \cot^2 \theta = \csc^2 \theta$$

3. Find the 6 Trigonometric Functions for $\frac{5\pi}{3}$. State the reference angle and quadrant the angle is located in.

Sinθ =   Cscθ =

Cosθ =   Secθ =

Tanθ =   Cotθ =

4. Find all solutions for the following equation: $2sinx + 2 = 1$

Solve using properties of natural and common logs.

5. $5^x = 27$

6. $log_2(3x + 5) - log_2 8 = 4$

7. $\ln(2x + 4) - \ln(12) = 3$

8. $3e^{6x-2} = 12$

9. *Solve by completing the square:* $m^2 + 10m + 14 = -7$

Solve by factoring:

10. $r^2 - 12r + 35 = 0$

11. $3x^2 - 10x + 3 = 0$

12. $3x^2 - 8x + 4 = 0$

Find the solution by using division of functions:

13. $(x^3 - 13x^2 + 40x + 18) \div (x - 7)$

Use your graphing calculator to solve.

14. Find the intersection of the functions:
   a) $y = \frac{1}{2}x + 3 \; and \; y = -x^2 + 2x + 6$
   b) $y = 2x^2 - 4x - 8$ and $y = \frac{1}{4}x^3 - 2x^2 + 6$

15. Find the zeros to the polynomials using your graphing calculator
   a) $3x^2 - 8x + 4 = 0$
   b) $y = \frac{1}{4}x^3 - 2x^2 + 6 = 0$

16. Find the max(s)/min(s) of functions
   a) $y = x^3 + 2x^2 - 3x + 2$
   b) $y = -\frac{1}{4}x^3 - 2x^2 + 6$

Additional Resources:

Converting radians/degrees
Hand trick for memorizing trig functions in Q1
Reference angles
Working with logs
Factoring Video

Calculator resources:
Finding intersection point on two functions
Max and Mins on a calculator
Finding zeros of a polynomial