

## Sample Questions from Selected Math Classes

### MATH 980

Simplify:  $\frac{2}{3} \left( \frac{3}{4} - \frac{1}{2} \right)$

Graph:  $4x - 2y + 12 = 0$

Solve for  $x$ :  $9xy + z = 3w$

Solve for  $x$ :  $-14 < -3x + 1 \leq 7$

### MATH 1010

Solve for  $x$ :

$$5x^2 - 2(x - 1) = 4x^2 + 6x - 13$$

Solve for  $x$ :  $2^{x+7} = 8$

Solve for  $x$  and  $y$ :

$$-3x + y = -1$$

$$x + y = 7$$

### MATH 1050

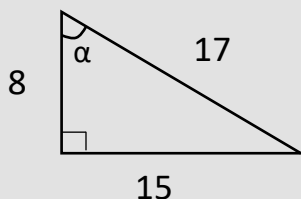
Solve for  $x$ :  $f^{-1}(x)$  is the inverse function of  $f(x)$ , and  $f(3x - 7) = 2$ , and  $f^{-1}(2) = 11$

Solve for  $x$ :  $\log_3(x) + \log_3(x - 2) = 1$

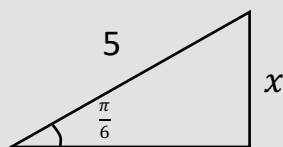
Find all roots of  $x^3 - 2x^2 - 3x + 6$  (Hint: 2 is a root.)

### MATH 1060

Solve for  $\tan \alpha$ :



Solve for  $x$ :



Simplify:

$$\sin^2(\theta) + \cos^2(\theta)$$

Graph:  $\cos x$

For solutions see the math self-placement website, [www.math.utah.edu/undergraduate/placement.php](http://www.math.utah.edu/undergraduate/placement.php). If you're not familiar with how to solve the problems from a particular course, enroll in the course to learn the material before moving to a higher course.