#### Math 1300 Final Exam Review

## Example 1: Evaluate.

$$-10 - 24 + 6$$

$$72 \div 6 \bullet 4$$

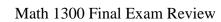
$$4-3(12 \div 6 \cdot 2)$$

## **Example 2** Find the least common multiple (LCM) of:

18, 20

# **Example 3** Simplify.

$$\left(\frac{4x^{-6}y^{14}x^2}{2x^{-3}y^4}\right)^2$$



 $\sqrt{96}$ 

**Example 4:** Let -4x + 7y = 56. Find the y-intercept.

**Example 5:** Let 3y = -7x - 10. Find the slope and the y-intercept

**Example 6:** Find the slope of the line that passes through (-8, 4) and (-3, -6).

**Example 7:** Find the equation of the line that passes through (-2, 8) and has slope 4.

**Example 8:** Complete the table given. Then sketch the graph of the line y = 4x - 16 by plotting the points in the completed table

X	у
-2	
	0
1	

**Example 9:** Find the coordinates of the y-intercept for:  $y = -4x^2 - 8x + 2$ .

**Example 10:** Let  $f(x) = -3x^2 + 10$ . Find

f(-2).

f(3)

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## **Example 11:** Simplify.

$$(4x^2-2x+9)-(5x^2-7x-1)$$

$$(x-5)(x+7)$$

$$(x-4)(x+4)$$

# **Example 12:** Factor. $16x^2 - 144$

$$16x^2 - 144$$

$$x^2 + 13x + 36$$

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$$x^2 + 2x - 48$$

$$x^3 - 9x^2 + 4x - 36$$

**Example 13:** Solve for x.

$$x^2 - 9 = 0$$

$$x^2 - 5x - 84 = 0$$

**Example 14:** Find the domain of  $f(x) = \frac{x+5}{x-7}$