East Los Angeles College
Department of Mathematics
Math 115
Final Exam Study Guide

Solve the following equations for x.

1) $-x + 5 = -10$

2) $2(x - 5) + 8 = 10$

3) $\frac{x}{2} = \frac{3}{8}$

4) $\frac{3}{5}x = -2$

5) $2x - 3 = 12$

6) $3x - 2 = x + 8$

7) $\frac{x}{4} = -6$

8) $\frac{2}{5}x = \frac{1}{4}$

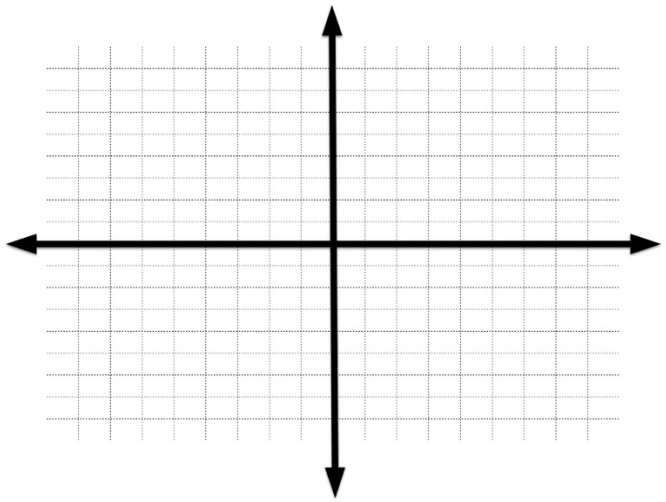
Solve and graph the following inequalities.

9) $2x - 6 \geq x + 14$

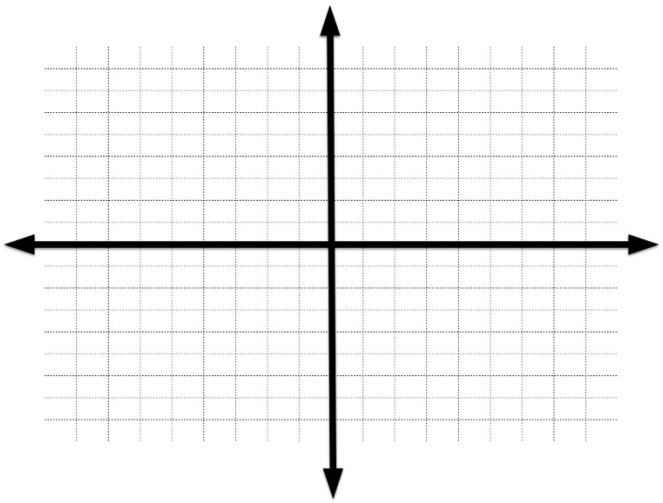
10) $-3(x + 2) \geq -12$

Graph the following Linear Equations.

11) $2x + y = -5$

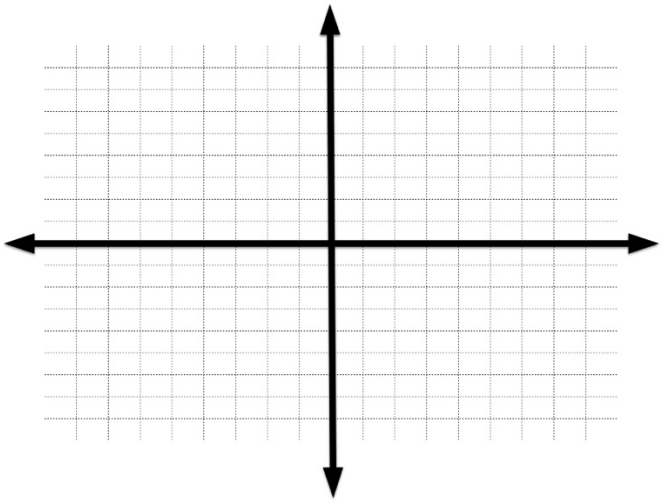


12) $x - 3y = 12$



Solve the following systems by graphing.

13) $\begin{matrix} 3x + y = -1 \\ x + 2y = -2 \end{matrix}$



Solve the following system by the addition (elimination) method.

14) $\begin{matrix} x - 2y = 5 \\ 3x + y = 8 \end{matrix}$

15) The perimeter of a rectangle is 500 m. If the length is 40 m for than twice the width, what are the dimensions?

Use properties of exponents to simplify the following.

16) $4x^2y \cdot 3xy^3$

17) $(2x^4)^3$

18) $\frac{6x^6}{2x}$

19) $5xy^{-2} \cdot 2x^3y$

20) $4x^{-3}2x^5$

21) $\frac{15x}{3x^{-4}}$

Add and Subtract the following.

22) $(3x^2 - 3x + 4) + (x^2 - 2x + 5)$

23) $(3x^2 - 3x + 4) - (x^2 - 2x + 5)$

Multiple the following

24) $5x(x - 3)$

25) $(x + 4)(2x - 3)$

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

27) $(x - 2)(2x^2 - 3x + 4)$

Divide the following

28) $x-4\overline{)x^2-5x+7}$

Solve for x

29) $x(x-1)=20$

30) $x^2=81$

31) $2x^2-7x=15$

32) $x^2 + x \quad - 12 = 0$

33) $2x^2 - x - 15 = 0$

34) $x^2 - 9 = 0$

35) 12% of 50 is what number?

36) 18% of what number is 50?

37) What percent of 60 is 32?

38) What is your name?

Answer Sheet

1		20	
2		21	
3		22	
4		23	
5		24	
6		25	
7		26	
8		27	
9		28	
10		29	
11	Use Graph Paper	30	
12	Use Graph Paper	31	
13	Use Graph Paper	32	
14		33	
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