



- Name: _____
 - Date: _____
 - Section: _____
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ECON 300: Intermediate Price Theory

Problem Set #0

Math Review

INSTRUCTIONS:

- This problem set is not graded.

Problem 1. System of Linear Equations

Find the value(s) of x and y :

1.A. $x + 2y = 5$
 $x + y = 3$

1.B. $4x + y = 9$
 $2x + 3y = 7$

1.C. $2x - y = 1$
 $x + 2y = 18$

1.D. $2x + 3y = 18$
 $3x + 2y = 22$

1.E. $x + 3y = 8$
 $-x + 2y = 2$

Problem 2. Exponents

Solve the following.

2.A. $x \times x \times x$

2.B. $x^3 \times x^2$

2.C. $x^2 \times y \times x$

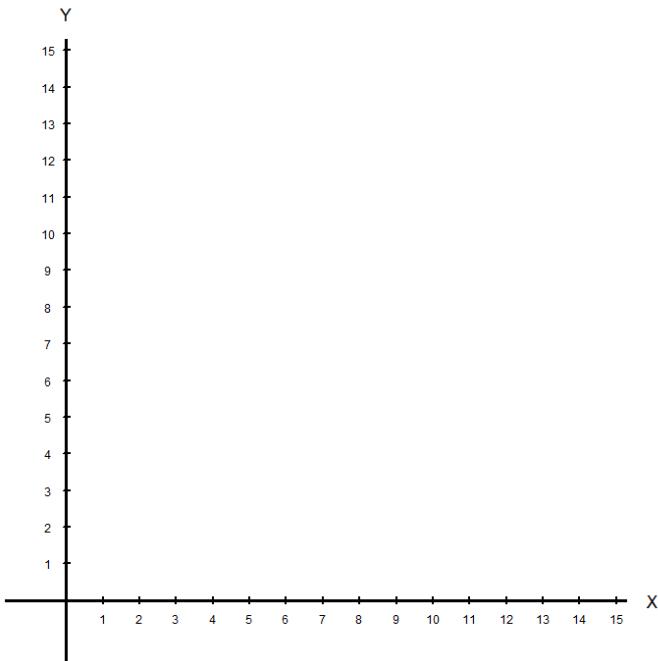
2.D. $\frac{x^3}{x}$

2.E. $\frac{x^5 \times y}{x^2 \times y^2}$

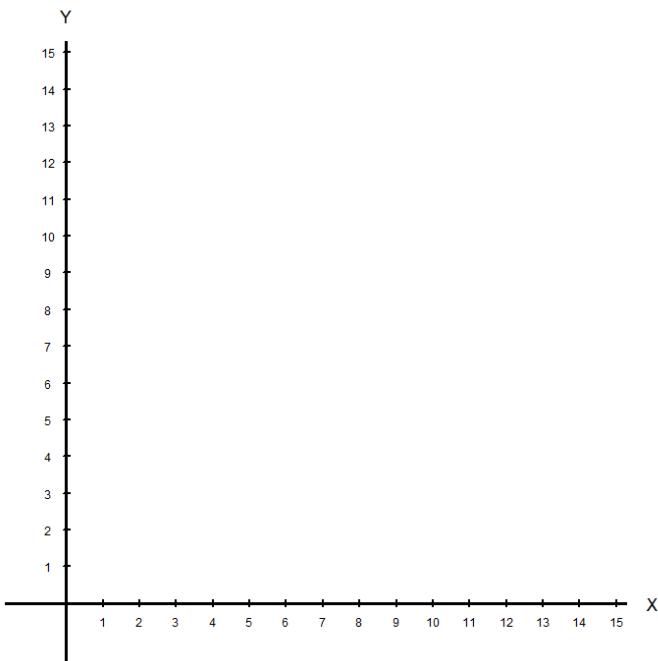
Problem 3. Slopes

Plot the following equations on the empty chart, and calculate their respective slopes.

3.A. $y = 3x + 1$

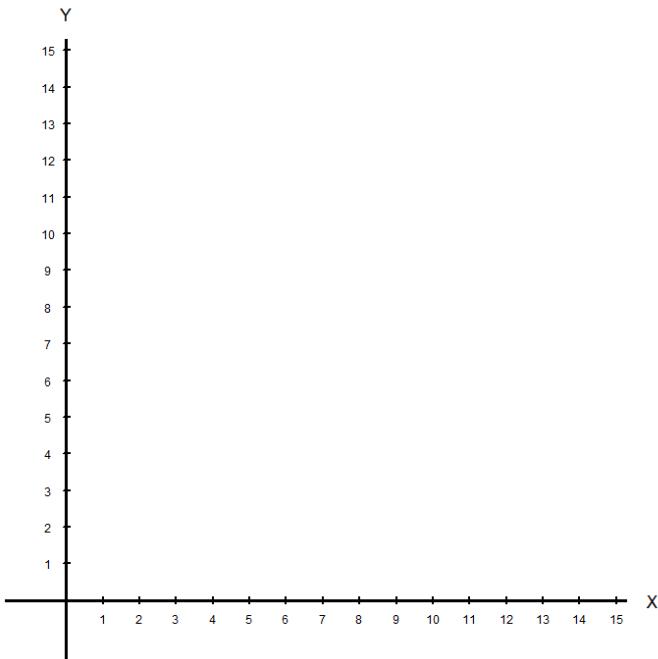


3.B. $y = 14 - 2x$

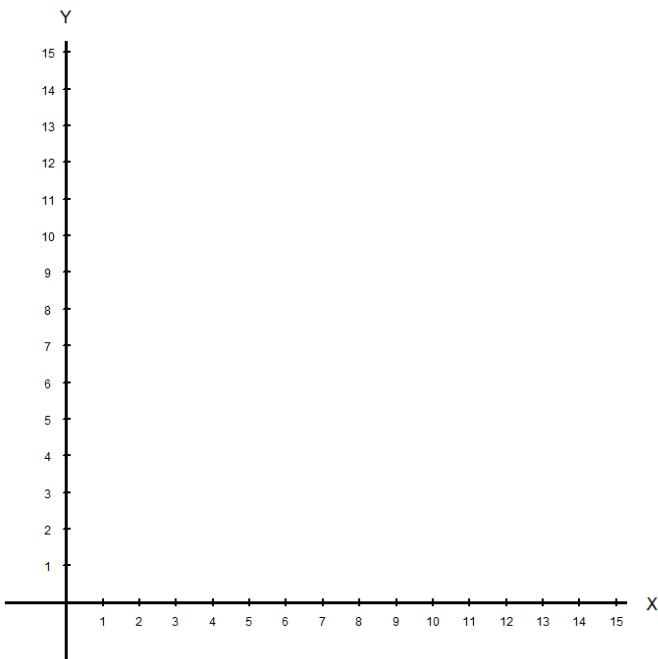


Problem 3. Slopes (Continued)

3.C. $y = 7 - \frac{1}{2}x$



3.D. $y = 5 + \frac{1}{2}x$



Problem 4. Derivatives

Solve.

$$4.A. \frac{d}{dx} 2x$$

$$4.B. \frac{d}{dx} x^2$$

$$4.C. \frac{d}{dx} (2x^5 + x^2)$$

$$4.D. \frac{\partial}{\partial x} xy^2$$

$$4.E. \frac{\partial}{\partial y} xy^2$$