

Intermediate Algebra
Review B: Semester 1 Final

Name: Key-Korhven Hour: _____

Please do the entire worksheet WITHOUT the use of a calculator.

Simplify.

1. -3^2

-9

2. 3^2

9

3. $(-3)^2$

9

4. $3+4(-5)$

-17

5. $41+12 \div 2$

47

6. $5x-2(4x-3)+7$

$5x-8x+6+7$

$-3x+13$

Solve the following systems using elimination.

7. $x-2y=-19$
 $5x+2y=1$

$\frac{6x}{6} = \frac{-18}{6}$

$x = -3$

$-3-2y=-19$
 $+3 \quad +3$

$-2y = -16$
 $\frac{-2y}{-2} = \frac{-16}{-2}$

$y = 8$

The solution is the point

$(-3, 8)$

8. $-3x+4y=18$
 $+ (2x+4y=8)$

$\frac{5x}{5} = \frac{10}{5}$

$x = 2$

$3(2)+4y=18$
 $-6 \quad -6$

$4y = 12$
 $\frac{4y}{4} = \frac{12}{4}$

$y = 3$

The solution to the system is the point $(2, 3)$.

9. $2x+y=3$
 $2(-x+3y=-12)$

$2x+y=3$

$-2x+6y=-24$

$\frac{7y}{7} = \frac{-21}{7}$

$y = -3$

The solution to the system is the point

$(3, -3)$

10. $(5x+2y=-1) \cdot 3$
 $(3x+7y=11) \cdot -5$

$15x+6y=-3$
 $-15x-35y=-55$

$\frac{-29y}{-29} = \frac{-58}{-29}$

$y = 2$

The solution to the system is the point

$(-1, 2)$

$2x+3=3$

$\frac{2x}{2} = \frac{6}{2}$

$x = 3$

$5x+2(2)=-1$

$\frac{5x}{5} = \frac{-5}{5}$

$x = -1$