Kuta Software - Infinite Algebra 1 Name_____

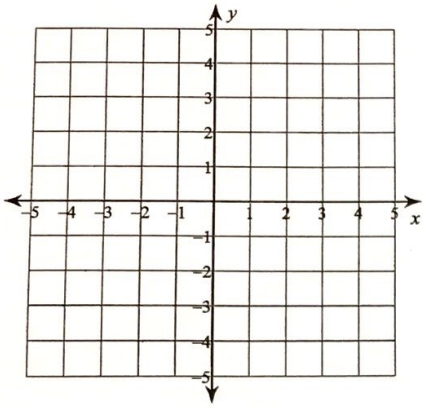
Solving Systems of Equations by Graphing

Date_____ Period____

Solve each system by graphing.

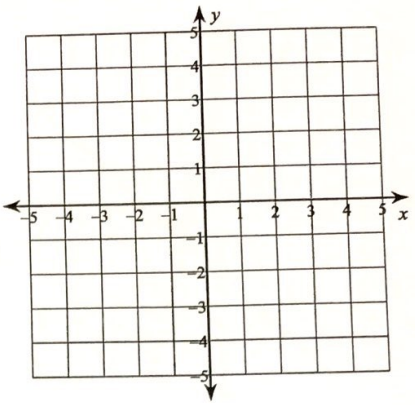
1) $y = -\frac{5}{3}x + 3$

$y = \frac{1}{3}x - 3$



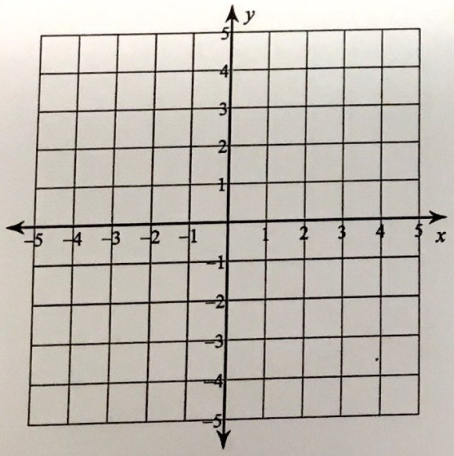
2) $y = 4x + 3$

$y = -x - 2$



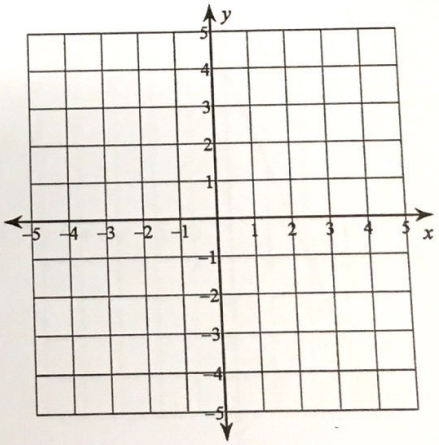
3) $y = -\frac{1}{2}x - 1$

$y = \frac{1}{4}x - 4$



4) $y = -1$

$y = -\frac{5}{2}x + 4$



Kuta Software - Infinite Algebra 1

Name Answer Key

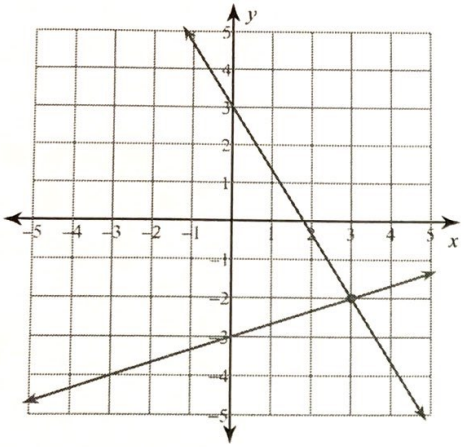
Solving Systems of Equations by Graphing

Date _____ Period ____

Solve each system by graphing.

1) $y = -\frac{5}{3}x + 3$

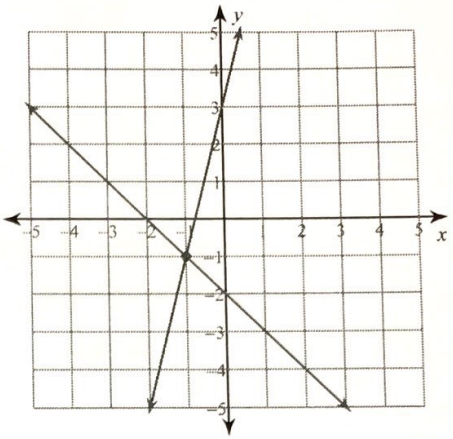
$y = \frac{1}{3}x - 3$



$(3, -2)$

2) $y = 4x + 3$

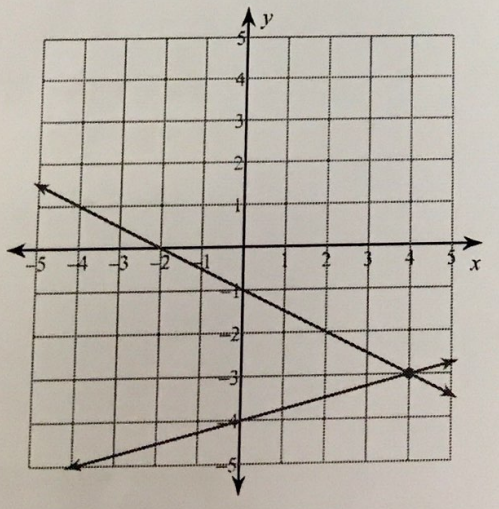
$y = -x - 2$



$(-1, -1)$

3) $y = -\frac{1}{2}x - 1$

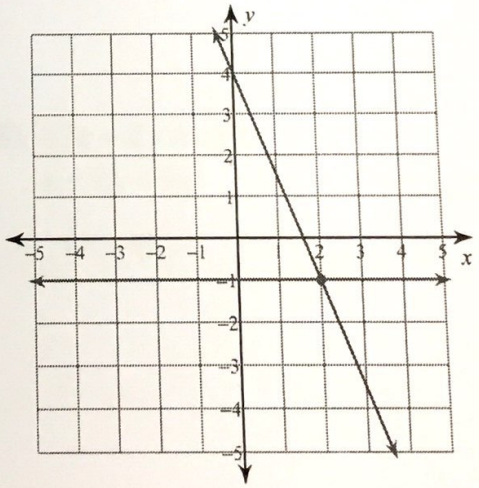
$y = \frac{1}{4}x - 4$



$(4, -3)$

4) $y = -1$

$y = -\frac{5}{2}x + 4$



$(2, -1)$

Kuta Software - Infinite Algebra 1 Name_____

Solving Systems of Equations by Substitution

Date_____ Period____

Solve each system by substitution. or Elimination

1) $y = 6x - 11$
$-2x - 3y = -7$

2) $2x - 3y = -1$
$y = x - 1$

3) $y = -3x + 5$
$5x - 4y = -3$

4) $-3x - 3y = 3$
$y = -5x - 17$

5) $y = -2$
$4x - 3y = 18$

6) $y = 5x - 7$
$-3x - 2y = -12$

7) $-4x + y = 6$
$-5x - y = 21$

8) $-7x - 2y = -13$
$x - 2y = 11$

9) $-5x + y = -2$
$-3x + 6y = -12$

10) $-5x + y = -3$
$3x - 8y = 24$

Solving Systems of Equations by Substitution or Elimination

Solve each system by substitution.

1) $y = 6x - 11$
$-2x - 3y = -7$

(2, 1)

2) $2x - 3y = -1$
$y = x - 1$

(4, 3)

3) $y = -3x + 5$
$5x - 4y = -3$

(1, 2)

4) $-3x - 3y = 3$
$y = -5x - 17$

(–4, 3)

5) $y = -2$
$4x - 3y = 18$

(3, –2)

6) $y = 5x - 7$
$-3x - 2y = -12$

(2, 3)

7) $-4x + y = 6$
$-5x - y = 21$

(–3, –6)

8) $-7x - 2y = -13$
$x - 2y = 11$

(3, –4)

9) $-5x + y = -2$
$-3x + 6y = -12$

(0, –2)

10) $-5x + y = -3$
$3x - 8y = 24$

(0, –3)

Writing Linear Equations

Date_____ Period____

Write the slope-intercept form of the equation of each line.

1) $3x - 2y = -16$

2) $13x - 11y = -12$

3) $9x - 7y = -7$

4) $x - 3y = 6$

5) $6x + 5y = -15$

6) $4x - y = 1$

7) $11x - 4y = 32$

8) $11x - 8y = -48$

Write the standard form of the equation of the line through the given point with the given slope.

9) through: $(1, 2)$, slope $= 7$

10) through: $(3, -1)$, slope $= -1$

11) through: $(-2, 5)$, slope $= -4$

12) through: $(3, 5)$, slope $= \frac{5}{3}$

Kuta Software - Infinite Algebra 1 Name Answer Key

Writing Linear Equations

Date _____ Period ____

Write the slope-intercept form of the equation of each line.

1) $3x - 2y = -16$

$y = \frac{3}{2}x + 8$

2) $13x - 11y = -12$

$y = \frac{13}{11}x + \frac{12}{11}$

3) $9x - 7y = -7$

$y = \frac{9}{7}x + 1$

4) $x - 3y = 6$

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

5) $6x + 5y = -15$

$y = -\frac{6}{5}x - 3$

6) $4x - y = 1$

$y = 4x - 1$

7) $11x - 4y = 32$

$y = \frac{11}{4}x - 8$

8) $11x - 8y = -48$

$y = \frac{11}{8}x + 6$

Write the standard form of the equation of the line through the given point with the given slope.

9) through: $(1, 2)$, slope $= 7$

$7x - y = 5$

10) through: $(3, -1)$, slope $= -1$

$x + y = 2$

11) through: $(-2, 5)$, slope $= -4$

$4x + y = -3$

12) through: $(3, 5)$, slope $= \frac{5}{3}$

$5x - 3y = 0$

Simplify.

Simplifying radical expressions

13) $7\sqrt{600}$

14) $5\sqrt{45}$

15) $5\sqrt{180}$

16) $3\sqrt{405}$

17) $2\sqrt{36}$

18) $9\sqrt{125}$

19) $8\sqrt{27}$

20) $12\sqrt{1764}$

21) $3\sqrt{900}$

22) $7\sqrt{2535}$

23) $11\sqrt{1215}$

24) $2\sqrt{200}$

Answer Key

13) $7\sqrt{600}$

$70\sqrt{6}$

14) $5\sqrt{45}$

$15\sqrt{5}$

15) $5\sqrt{180}$

$30\sqrt{5}$

16) $3\sqrt{405}$

$27\sqrt{5}$

17) $2\sqrt{36}$

12

18) $9\sqrt{125}$

$45\sqrt{5}$

19) $8\sqrt{27}$

$24\sqrt{3}$

20) $12\sqrt{1764}$

504

21) $3\sqrt{900}$

90

22) $7\sqrt{2535}$

$91\sqrt{15}$

23) $11\sqrt{1215}$

$99\sqrt{15}$

24) $2\sqrt{200}$

$20\sqrt{2}$

Simplify Answers should be written using positive exponents

17) $(2b^4)^{-1}$

18) $(x^2y^{-1})^2$

19) $(2x^4y^{-3})^{-1}$

20) $(3m)^{-2}$

21) $\frac{r^2}{2r^3}$

22) $\frac{x^{-1}}{4x^4}$

23) $\frac{3n^4}{3n^3}$

24) $\frac{m^4}{2m^4}$

25) $\frac{3m^{-4}}{m^3}$

26) $\frac{2x^4y^{-4}z^{-3}}{3x^2y^{-3}z^4}$

27) $\frac{4x^0y^{-2}z^3}{4x}$

28) $\frac{2h^3j^{-3}k^4}{3jk}$

29) $\frac{4m^4n^3p^3}{3m^2n^2p^4}$

30) $\frac{3x^3y^{-1}z^{-1}}{x^{-4}y^0z^0}$

17) $(2b^4)^{-1}$

$\frac{1}{2b^4}$

18) $(x^2y^{-1})^2$

$\frac{x^4}{y^2}$

Answer Key

19) $(2x^4y^{-3})^{-1}$

$\frac{y^3}{2x^4}$

20) $(3m)^{-2}$

$\frac{1}{9m^2}$

21) $\frac{r^2}{2r^3}$

$\frac{1}{2r}$

22) $\frac{x^{-1}}{4x^4}$

$\frac{1}{4x^5}$

23) $\frac{3n^4}{3n^3}$

n

24) $\frac{m^4}{2m^4}$

$\frac{1}{2}$

25) $\frac{3m^{-4}}{m^3}$

$\frac{3}{m^7}$

26) $\frac{2x^4y^{-4}z^{-3}}{3x^2y^{-3}z^4}$

$\frac{2x^2}{3yz^7}$

27) $\frac{4x^0y^{-2}z^3}{4x}$

$\frac{z^3}{y^2x}$

28) $\frac{2h^3j^{-3}k^4}{3jk}$

$\frac{2h^3k^3}{3j^4}$

29) $\frac{4m^4n^3p^3}{3m^2n^2p^4}$

$\frac{4m^2n}{3p}$

30) $\frac{3x^3y^{-1}z^{-1}}{x^{-4}y^0z^0}$

$\frac{3x^7}{yz}$

Factor completely.

Factoring ($a = 1$)

13) $b^2 - 6b + 8$

14) $n^2 + 6n + 8$

15) $2n^2 + 6n - 108$

16) $5n^2 + 10n + 20$

17) $2k^2 + 22k + 60$

18) $a^2 - a - 90$

19) $p^2 + 11p + 10$

20) $5v^2 - 30v + 40$

21) $2p^2 + 2p - 4$

22) $4v^2 - 4v - 8$

23) $x^2 - 15x + 50$

24) $v^2 - 7v + 10$

25) $p^2 + 3p - 18$

26) $6v^2 + 66v + 60$

Answer Key

13) $b^2 - 6b + 8$

$(b - 4)(b - 2)$

14) $n^2 + 6n + 8$

$(n + 2)(n + 4)$

15) $2n^2 + 6n - 108$

$2(n + 9)(n - 6)$

16) $5n^2 + 10n + 20$

$5(n^2 + 2n + 4)$

17) $2k^2 + 22k + 60$

$2(k + 5)(k + 6)$

18) $a^2 - a - 90$

$(a - 10)(a + 9)$

19) $p^2 + 11p + 10$

$(p + 10)(p + 1)$

20) $5v^2 - 30v + 40$

$5(v - 2)(v - 4)$

21) $2p^2 + 2p - 4$

$2(p - 1)(p + 2)$

22) $4v^2 - 4v - 8$

$4(v + 1)(v - 2)$

23) $x^2 - 15x + 50$

$(x - 10)(x - 5)$

24) $v^2 - 7v + 10$

$(v - 5)(v - 2)$

25) $p^2 + 3p - 18$

$(p - 3)(p + 6)$

26) $6v^2 + 66v + 60$

$6(v + 10)(v + 1)$

Name_____

Factoring Trinomials (a > 1)

Date_____ Period____

Factor each completely.

1) $3p^2 - 2p - 5$

2) $2n^2 + 3n - 9$

3) $3n^2 - 8n + 4$

4) $5n^2 + 19n + 12$

5) $2v^2 + 11v + 5$

6) $2n^2 + 5n + 2$

7) $7a^2 + 53a + 28$

8) $9k^2 + 66k + 21$

Kuta Software - Infinite Algebra 1

Name Answer Key

Date_____ Period____

Factoring Trinomials (a > 1)

Factor each completely.

1) $3p^2 - 2p - 5$

$(3p - 5)(p + 1)$

2) $2n^2 + 3n - 9$

$(2n - 3)(n + 3)$

3) $3n^2 - 8n + 4$

$(3n - 2)(n - 2)$

4) $5n^2 + 19n + 12$

$(5n + 4)(n + 3)$

5) $2v^2 + 11v + 5$

$(2v + 1)(v + 5)$

6) $2n^2 + 5n + 2$

$(2n + 1)(n + 2)$

7) $7a^2 + 53a + 28$

$(7a + 4)(a + 7)$

8) $9k^2 + 66k + 21$

$3(3k + 1)(k + 7)$