

Honors Geometry
Pre-requisite Skills Summer Packet

Name _____

Date _____ Hour _____

Show your work and put your final answer on the blank provided.

Simplify the following expressions.

1. $6(x-1) - 3(2x+1)$ 1. _____

2. $mn^2(10m^2n - 3m^3)$ 2. _____

3. $(x-2)(5x-1)$ 3. _____

4. $(1-2y)^2$ 4. _____

5. $2x(x+1)$ 5. _____

6. $4(a-1) + 2[(a+b) - 6(b-1)]$ 6. _____

7. $(7x+4) - (2x+2)$ 7. _____

Factor the following expressions

8. $24y^3 - 3y^2$ 8. _____

9. $4x^2 + 16$ 9. _____

10. $9y^2 - 1$ 10. _____

11. $2x^2 - 18$ 11. _____

12. $x^2 + 9x + 20$ 12. _____

13. $a^2 - a - 6$ 13. _____

14. $y^2 - 12y + 36$ 14. _____

Solve each system of equations using substitution or elimination.

15. $m - n = 0$
 $3m - 2n = 1$ 15. _____

16. $x + 2y = 38$
 $x - 12y = -32$ 16. _____

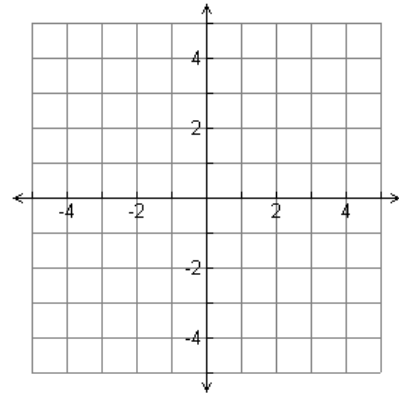
17. $8x + y = -8$
 $-2x + 3y = 35$

17. _____

Solve the following system of equations by graphing.

18. $x + 4y = 12$
 $x - y = 2$

18.



Simplify the following radical expressions.

1. $\sqrt{32}$

1. _____

2. $\sqrt{80}$

2. _____

3. $\frac{\sqrt{2}}{\sqrt{3}}$

3. _____

4. $\frac{1}{\sqrt{2}}$

4. _____

5. $\sqrt{45} \cdot \sqrt{5}$

5. _____

6. $\sqrt{8} - \sqrt{64}$

6. _____

7. $2\sqrt{48} - \sqrt{9} - 6\sqrt{18}$

7. _____

8. $(3\sqrt{2})^2$

8. _____

Solve the following equations.

1. $2a - 1 = 3a + 4$

1. _____

2. $2(d + 5) - 4(d - 5) = 0$

2. _____

3. $4x = 3(4x - 3)$

3. _____

4. $n^2 - 2n - 24 = 0$

4. _____

5. $n^2 - 36 = 0$

5. _____

6. $\frac{t}{25} = \frac{471}{15}$

6. _____

7. $\frac{4}{x+2} = \frac{16}{5+x}$

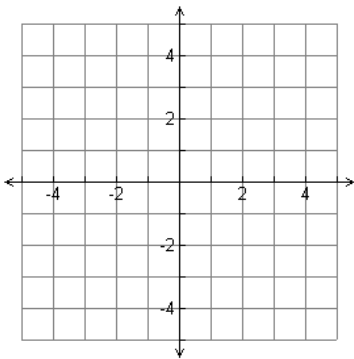
7. _____

8. $\frac{6x+5}{4x+1} = \frac{3x-2}{2x-1}$

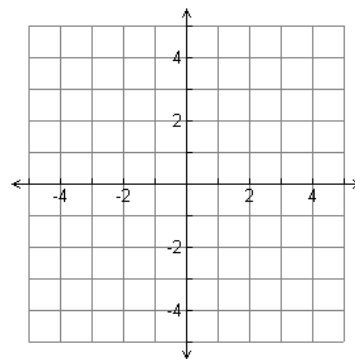
8. _____

Graph the following linear equations.

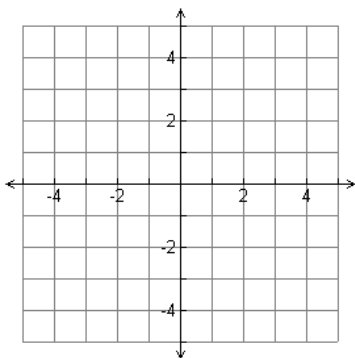
1. $3x - 2y = 2$



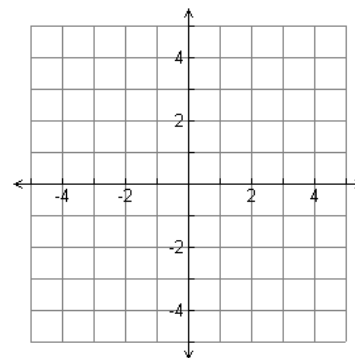
2. $y = -4$



3. $y = -\frac{3}{4}x$



4. $-3x + 4y = 12$



3. Find the y-intercept of $2y - 5x = 0$ 3. _____
4. Find the equation of a line in slope-intercept form that has a slope of -3 and y-intercept of (0, 8). 4. _____
5. Find the equation in slope-intercept form for the line that has a slope of 2 and passes through the point $(-1, -1)$. 5. _____
6. Find the equation of a line in slope-intercept form that passes through $(-6, -7)$ and $(-5, 1)$. 6. _____
7. Calculate the slope of the line that passes through the points $(3, -2)$ and $(8, 4)$. 7. _____
8. Use the distance formula to determine the distance between the two points $(3, 6)$ and $(1, 2)$. 8. _____
9. Use the midpoint formula to determine the midpoint of the two points $(3, 6)$ and $(1, 2)$. 9. _____