Geometry Summer Assignment

Geometry is a graduation requirement class and has an End of Year Test (FSA) required. In order to successfully complete this course, you will need to be very familiar with the following Prealgebra and Algebra 1 topics:

- Solving Multiple step Linear Equations
- Solving lettered Equations
- Properties of radicals
- Simplifying Radical
- Basic Factoring
- Solving quadratic equations by completing a square
- Solving quadratic equations by factoring
- Solving quadratic Equations by using quadratic Formula
- Solving a system of equations
- Modeling

Use Khan Academy to review all these topics and complete the assignment attached.

The Summer Assignment will be graded!!

Geometry Summer Assignment

Name _____

Date _____

Show work for every question.
Answers should be left as simplified fractions or radicals.
Do not use a calculator!!!!
For questions 1-6. Solve each equation for the unknown letter.
1.

$7b - 7 - 8b = -15$

Answer:

2.

$-3(1 + 4a) = 33$

Answer:

3.

$-3(n - 5) = 3(1 - 3n)$

Answer:

4.

$-\dfrac{22}{9}r = \dfrac{11}{9}$

Answer:

5.

$$-\frac{11}{2} = -2\frac{1}{3} + 3\frac{1}{6}k$$

Answer:

6.

$$\frac{7}{4}(b-1) = \frac{7}{8}$$

Answer:

For questions 7- 12. Solve for the indicated variable in the parentheses.

7.

$$y = 5x - 6 \quad (x)$$

Answer:

8.

$$A = 2(L + W) \quad (W)$$

Answer:

9.

$$A = 1/2h(b + c) \quad (b)$$

Answer:

10.

$V = \pi r^2 h$ *(h)*

Answer:

11.

$A = \dfrac{x + y}{2}$ *(y)*

Answer:

12.

$x = \dfrac{2y - z}{4}$ *(z)*

Answer:

For questions 13- 17. Simplify each radical.
Example:

Method 2 *(Factor out perfect squares)*: We can factor 75 as $25 \bullet 3$.

Then, $\sqrt{75} = \sqrt{25 \bullet 3}$. The square root of 25 is 5. Therefore $\sqrt{75} = 5\sqrt{3}$.

13.

$\sqrt{18}$

Answer:

14.

$\sqrt{90}$

Answer:

15.

$\sqrt{24}$

Answer:

16.

$\sqrt{40x^3 y^4}$

Answer:

17.

$$\sqrt{50c^2d^3}$$

Answer:

For questions 18- 20. Solve each quadratic equation by factoring.

18.

$$x^2 + 14x + 45 = 0$$

Answer:

19.

$$x^2 + 6x - 10 = 30$$

Answer:

20.

$$4x^2 - 100 = 0$$

Answer:

For questions 21- 22. Solve each equation by completing the square.

21.

$$x^2 - 8x + 15 = 0$$

Answer:

22.

$$-3n^2 + 4n - 59 = -4n^2$$

Answer:

For questions 23-25. Solve each system.

23.

What is the first step in solving the system shown using the elimination method?

$$\begin{cases} 3x - 12y = 5 \\ 3y - x = 9 \end{cases}$$

A. Multiply each term in $3y - x = 9$ by 12.
B. Multiply each term in $3y - x = 9$ by -12.
C. Rewrite the equations so like variable terms are in the same order.
D. Add the corresponding sides of each equation.

Answer:

24.(Use the calculator)

A local business was looking to hire a landscaper to work on their property. They narrowed their choices to two companies. Flourish Landscaping Company charges a flat rate of $120 per hour. Green Thumb Landscapers charges $70 per hour plus a $1600 equipment fee. Write a system of equations representing how much each company charges. Determines and state the number of hours that must be worked for the cost of each company to be the same.
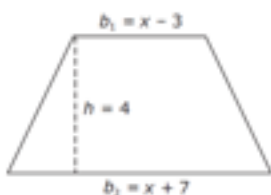
Answer:

25. Solve the system

$$-2x - 7y = -13$$
$$3x + 6y = 15$$

Answer:

26.

The area of a trapezoid is found using the formula $A = \frac{1}{2}h(b_1 + b_2)$, where A is the area, h is the height, and b_1 and b_2 are the lengths of the bases.

$b_1 = x - 3$

$h = 4$

$b_2 = x + 7$

What is the area of the above trapezoid?

A. $A = 4x + 2$

B. $A = 4x + 8$

C. $A = 2x^2 + 4x - 21$

D. $A = 2x^2 + 8x - 42$

27.

A linear function passes through the points $(10,5)$ and $(-15,-5)$. A second function is represented by the equation $4x - 3y = 6$. What is the $y - intercept$ of the function with the greater rate of change?

Answer:

28.

Ken solved the linear equation $2(5y - 1) = 18$ using the following steps.

Step 1	$2(5y - 1) = 18$
Step 2	$10y - 1 = 18$
Step 3	$10y = 19$
Step 4	$y = 1.9$

Which statement is true about Ken's method?
A. Ken made a mistake between Steps 1 and 2.
B. Ken made a mistake between Steps 2 and 3.
C. Ken made a mistake between Steps 3 and 4
D. Ken solved the equation correctly.

Answer:

29.

Which property of equality can be used to justify this step?

$$15 - 10x = 6x$$
$$\underline{+ 10x \quad + 10x}$$
$$15 \quad = 16x$$

A. Substitution Property of Equality
B. Summation Property of Equality
C. Addition Property of Equality
D. Subtraction Property of Equality

Answer:

30.

When solving the equation $4(3x^2 + 2) - 9 = 8x^2 + 7$, Emily wrote $4(3x^2 + 2) = 8x^2 + 16$ as her first step. Which property justifies Emily's first step?

A. addition property of equality

B. commutative property of addition

C. multiplication property of equality

D. distributive property of multiplication over addition

Answer: