Oklahoma Christian School
4680 E 2nd Street, Edmond, OK 73034
(405) 341-2265

Summer Assignment 2023 for Geometry Students

Dear Geometry Student,

Welcome to Geometry, where you will explore various concepts of two-dimensional and three-dimensional figures, direct and indirect proofs, trigonometry, and so much more. This class will push you and expand on your knowledge of Algebra I as well as review Geometry concepts taught in Middle School.

As a student in Geometry, **you are expected to complete the summer math packet with work shown prior to the first day of fall semester of 2021**. The packet can be found on the OCS website under High School -----> Documents and Forms -----> Summer 2021 Math Prep - Geometry

Please know that you are responsible for bringing the completed packet (with work shown) to class.

You may use any of the additional resources that are provided below to supplement or relearn topics. You may ask clarification questions before a **review test**. Please make sure to read through every topic thoroughly and use the recommended additional resources for extra practice.

Thank you so much, and I look forward to seeing you on the first day!

Video Help:

- Krista King Math
- Khan academy
- YouTube

Worksheets/practice problems:

www.ixl.com/math
www.kutasoftware.com

OCS Summer Math Assignment 2023 Name_____

© 2023 Kuta Software LLC. All rights reserved.

Geometry

Solve each equation. You must show all of your steps.

1) $-96 = -4(3r + 3)$

2) $-220 = 4(-6n - 5) - 8$

3) $4(8b - 6) = -24 + 2b$

4) $-5(3 + 8n) = 22 - 3n$

5) $-4(1 - 5v) - (7 + 6v) = -25$

6) $-7(1 + 5x) - (8 + 5x) = 25$

7) $8n + 5(-7n - 8) = -6(4 + 3n) - n$

8) $-6(n - 7) - 8n = -(n - 7) - 6n$

9) $-7\left(\frac{5}{4}x + \frac{15}{8}\right) = -\frac{105}{8} - \frac{9}{4}x$

10) $-\frac{20}{7}\left(7a - \frac{3}{4}\right) = \frac{8}{7}a + \frac{163}{7}$

11) $n - \frac{3}{8} = \frac{19}{6}\left(\frac{1}{8}n - \frac{1}{2}\right)$

12) $2\left(\frac{4}{3}x + 1\right) - 2x = \frac{8}{7}x + \frac{7}{6}$

13) $\frac{3}{4}\left(x - \frac{17}{6}\right) = -\frac{3}{2}x - \frac{35}{8}$

14) $-2\left(-\frac{3}{4}b + 1\right) = -\frac{10}{3} + \frac{1}{2}b$

© 2023 Kuta Software LLC. All rights reserved. Made with Infinite Algebra 1.

Find the slope of the line through each pair of points using the Slope Formula.

15) $(18, -10), (6, -14)$

16) $(-9, 0), (11, -1)$

17) $(20, 17), (11, 12)$

18) $(-3, 2), (8, 16)$

19) $(20, -2), (-3, 17)$

Write the slope-intercept form of the equation of the line through the given point with the given slope (use Point-Slope Form first).

20) through: $(-2, 4)$, slope $= -\frac{7}{2}$

21) through: $(-4, -1)$, slope $= \frac{3}{4}$

22) through: $(4, 3)$, slope $= \frac{1}{4}$

23) through: $(4, 4)$, slope $= 2$

Write the slope-intercept form of the equation of the line through the given points (use the Slope Formula then Point-Slope form first).

24) through: $(0, 3)$ and $(1, 0)$

25) through: $(-1, 5)$ and $(-1, 2)$

26) through: $(-2, -1)$ and $(-4, -3)$

27) through: $(-5, -3)$ and $(3, 4)$

© 2023 Kuta Software LLC. All rights reserved. Made with Infinite Algebra 1.

Factor each expression completely.

28) $x^2 + 4x$

29) $n^2 + 12n + 35$

30) $x^2 + 2x - 63$

31) $5r^2 + 23r - 10$

32) $10x^2 - 102x + 20$

33) $15x^2 - 27x$

34) $9b^2 - 100b + 100$

35) $8a^2 - 72a$

36) $27v^2 + 45v - 42$

Solve each equation by factoring.

37) $n^2 = -5n$

38) $v^2 = -32 + 12v$

39) $21n^2 + 38n = -5$

40) $7v^2 - 30 = 29v$

41) $5n^2 - 38n = 16$

42) $8x^2 = -31x + 4$

© 2023 Kuta Software LLC. All rights reserved.

Made with Infinite Algebra 1.

43) $-k^2 + 2k = -6k^2 + 7$

44) $13p^2 + 37p + 14 = -2p^2 - 6$

45) $3a^2 - 19a = -28$

46) $5n^2 - 20 = -2n^2 - 31n$

Simplify.

47) $\sqrt{448n^2}$

48) $\sqrt{294n^2}$

49) $\sqrt{256xy}$

50) $\sqrt{144u^2v^2}$

51) $\sqrt{108a^2b^3c^4}$

52) $\sqrt{150hj^2k^4}$

53) $7\sqrt{16v^3}$

54) $-\sqrt{128n}$

55) $\sqrt{6} \cdot 2\sqrt{15}$

56) $4\sqrt{5} \cdot -4\sqrt{2}$

57) $\sqrt{3}(3 + \sqrt{3})$

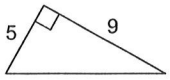
58) $\sqrt{2}(4 + 4\sqrt{2})$

© 2023 Kuta Software LLC. All rights reserved.

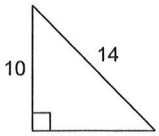
Made with Infinite Algebra 1.

Find each missing length to the nearest tenth.

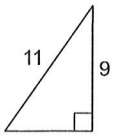
59)



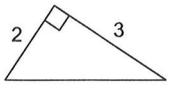
60)



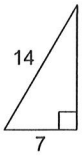
61)



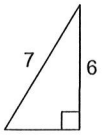
62)



63)

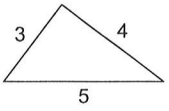


64)

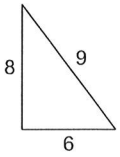


Do the following lengths form a right triangle?

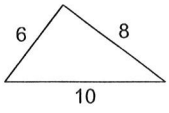
65)



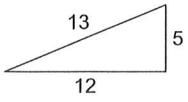
66)



67)



68)



© 2023 Kuta Software LLC. All rights reserved.