King
Accelerated Geometry - Math 201
Summer Assignment – 2025

NAME: _____

INSTRUCTIONS

1. Read directions carefully and work neatly and accurately.

2. You must show work for the problems. **All work must be done in this packet. Please circle all final answers. Write your answers on the answer sheet as well.** This assignment will not be accepted unless these directions are followed. Please remember that this will be due on the first day of class and you will have an assessment based on the topics covered in this assignment.

3. If you are unsure of how to do a problem, do not give up. Please refer to your notes from Algebra or the Internet. For example, Khan Academy, https://www.khanacademy.org/math/algebra. You can also email your previous mathematics teachers.

Useful Formulas

Slope-intercept form for a line: $y = mx + b$

Point-slope form for a line: $y - y_1 = m(x - x_1)$

Quadratic Formula: $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Geometry 201 Summer Assignment Answer Sheet

NAME: _____

1. _____	2. _____	3. _____
4. _____	5. _____	6. _____
7. _____	8. _____	9. _____
10. _____	11. _____	12. _____
13. _____	14. _____	15. _____
16. _____	17. _____	18. _____
19. _____	20. _____	21. _____
22. _____	23. _____	24. _____
25. _____	26. _____	27. _____
28. _____	29. _____	30. _____
31. _____	32. _____	33. _____
34. _____	35. _____	36. _____
37. _____	38. _____	39. _____
40. _____	41. _____	42. _____
43. _____	44. _____	45. _____
46. _____	47. _____	48. _____
49. _____	50. _____	51. _____
52. _____	53. _____	54. _____
55. _____	56. _____	57. _____
58. _____	59. _____	60. _____

61. _____ 62. _____ 63. _____

64. _____ 65. _____ 66. _____

67. _____ 68. _____ 69. _____

70. _____ 71. _____ 72. _____

73. _____ 74. _____ 75. _____

76. _____ 77. _____ 78. _____

79. _____ 80. _____ 81. _____

82. _____ 83. _____ 84. _____

85. _____ 86. _____ 87. _____

88. _____ 89. _____ 90. _____

91. _____ 92. _____ 93. _____

94. _____

King Geometry 201 Summer Assignment Name_____

Evaluate each using the values given.

1) $r\left(r - \frac{4}{-3} - p\right)$; use $p = -3\frac{1}{3}$, and $r = -1\frac{2}{3}$

2) $\frac{p((-4) - m) + 2}{n}$; use $m = 2\frac{1}{3}$, $n = -1\frac{3}{5}$, and $p = \frac{2}{3}$

Evaluate each expression.

3) $\left(\frac{-1}{2}\right) \times \frac{7}{5} \div \left(-3\frac{3}{5}\right)$

4) $\frac{4}{3} \times \left(\frac{-5}{4}\right)^2$

5) $\left|2\frac{4}{5}\right| - -\frac{1\frac{1}{3}}{\frac{2}{3}}$

6) $\left(-3\frac{1}{3}\right)^2 + \frac{1\frac{1}{6}}{-\frac{1}{4}}$

Write each as an algebraic expression.

7) a number increased by 7 is less than 40

8) half of n is greater than 40

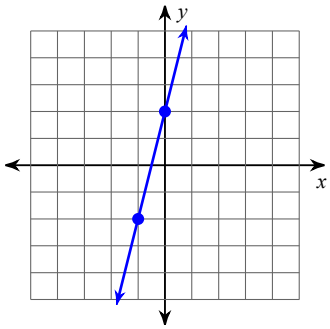
Find the value of x or y so that the line through the points has the given slope.

9) $(x, 4)$ and $(5, 5)$; slope: -1

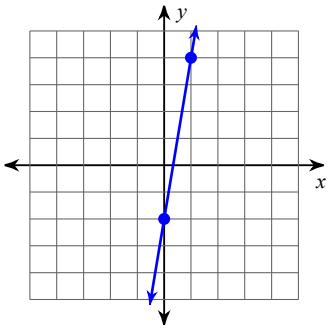
10) $(2, -6)$ and $(4, y)$; slope: $-\frac{1}{2}$

Find the slope of each line.

11)



12)



Find the slope of the line through each pair of points.

13) $(-12, -15), (13, -15)$

14) $(-2, -15), (-7, -2)$

Find the slope of each line.

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

16) $2x - 3y = -15$

Find the slope of a line parallel to each given line.

17) $x - 2y = -4$

18) $2x + y = -1$

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

19) through: $(4, 3)$, slope $= \frac{3}{2}$

20) through: $(4, -1)$, slope = 3

Write the slope-intercept form of the equation of the line through the given points.

21) through: $(2, 4)$ and $(5, -4)$

22) through: $(0, -2)$ and $(2, -1)$

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

23) through: $(-3, 1)$, slope $= \frac{3}{2}$

A) $y - 1 = \frac{5}{2}(x - 3)$

B) $y + 1 = \frac{2}{5}(x - 3)$

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

D) $y - 3 = -\frac{5}{2}(x + 1)$

24) through: $(5, 1)$, slope $= -\frac{2}{5}$

A) $y - 5 = -(x - 1)$

B) $y - 5 = -(x + 1)$

C) $y - 1 = -\frac{2}{5}(x - 5)$

D) $y + 1 = x - 5$

Simplify.

25) $3\sqrt{54} + 3\sqrt{2} + 2\sqrt{2}$

26) $2\sqrt{3} + 2\sqrt{12} - \sqrt{12}$

27) $\dfrac{\sqrt{8}}{3\sqrt{18}}$

28) $\dfrac{\sqrt{8}}{5\sqrt{50}}$

29) $3\sqrt{5}\left(5 + \sqrt{5}\right)$

30) $-5\sqrt{15}\left(-3\sqrt{3} + 3\sqrt{10}\right)$

31) $\sqrt{24n^4}$

32) $\sqrt{24x}$

Solve each inequality.

33) $100 > 4\left(1 + 6v\right)$

34) $84 < 2\left(6 - 6n\right)$

Simplify each difference.

35) $\left(5 + r^3 + 5r^2\right) - \left(-6 - 6r - 8r^2\right)$

36) $\left(-a^4 - 4a^3 + a^2\right) - \left(-6a^4 + 1 - 5a^2\right)$

Find each product.

37) $-5v(3v^2 - 2v + 5)$

38) $-3p^2(3p^2 - 2p + 5)$

39) $(-b - 8)(-b - 5)$

40) $(6n + 6)(2n - 6)$

41) $(4n - 6)^2$

42) $(4r + 1)^2$

Solve each system by elimination.

43) $7x + 18y = 15$
$10x + 9y = -12$

44) $4x + 12y = -24$
$-x - 6y = 18$

Solve each system by substitution.

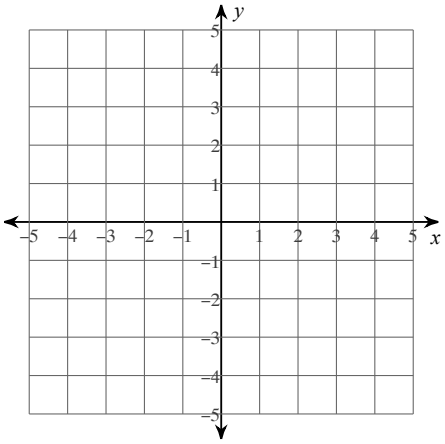
45) $x - 6y = 4$
$2x - 12y = 6$

46) $-5x + y = 2$
$-6x - 6y = -12$

Solve each system by graphing.

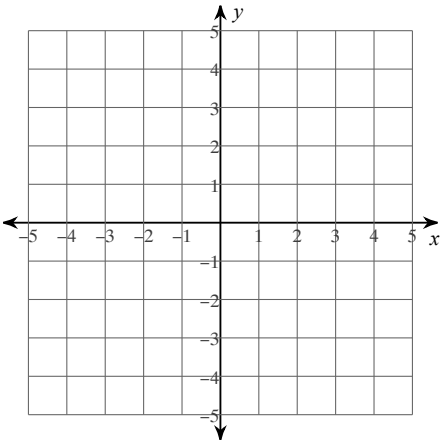
47) $y = \frac{2}{3}x - 4$

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



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

$y = -x + 4$



Solve each equation.

49) $-\frac{3}{8} - \frac{3}{2}n = \frac{7}{4}\left(-\frac{5}{3}n + 1\right)$

50) $\frac{27}{4} + \frac{5}{2}n = \frac{3}{2}\left(\frac{4}{3}n + \frac{11}{3}\right)$

51) $\left|a + 7\right| = 11$

52) $\left|x + 10\right| = 16$

Solve each equation for the indicated variable.

53) $c - a = d - r$, for a

54) $z = y + \frac{m}{x}$, for x

Solve each proportion.

55) $\frac{a+8}{4} = -\frac{2}{3}$

56) $\frac{a+6}{7} = \frac{2}{3}$

Factor the common factor out of each expression.

57) $6x^3 - 14x^5 - 2x^6$

58) $3x^2 + 9x + 12$

Factor each completely.

59) $x^2 - 15x + 54$

60) $3n^2 - 45n + 162$

61) $3n^2 + n - 24$

62) $2x^2 - 17x - 30$

63) $5n^2 - 9n$

64) $3v^2 + 37v + 70$

65) $10a^2 - 41a - 18$

66) $8x^2 - 42x + 27$

Solve each equation by factoring.

67) $2(k - 6)(3k - 5) = 0$

68) $2(p + 8)(5p + 6) = 0$

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

70) $v^2 = 2v$

71) $7x^2 - 52x = -21$

72) $2x^2 + 6 = 7x$

73) $5x^2 + 2x = 3$

74) $5k^2 + 14k = -8$

Solve each equation by taking square roots.

75) $8 + 25p^2 = 89$

76) $25p^2 - 3 = 61$

Solve each equation with the quadratic formula.

77) $x^2 - 10 = 2x$

78) $4x^2 - 2x = -1$

79) $2m^2 + 8m = 24$

80) $3r^2 - 12r = 96$

Simplify. Your answer should contain only positive exponents.

81) $\dfrac{2x^4y^{-3}\cdot x^{-3}y^2}{\left(y^0\right)^3}$

82) $\dfrac{\left(2y^3\right)^{-4}\cdot x^4y^2}{2y^{-1}}$

83) $\dfrac{a^2b^{-3}\cdot a^3b^{-3}}{\left(2a^2b^{-4}\right)^2}$

84) $\dfrac{\left(a^2b^4\right)^2\cdot a^4b^4}{\left(2a^{-3}b^{-3}\right)^3}$

Solve each question. Round your answer to the nearest hundredth.

85) It takes Ming ten minutes to sweep a porch. Jasmine can sweep the same porch in eight minutes. Find how long it would take them if they worked together.

86) A plane traveled 336 kilometers each way to Cleveland and back. The trip there was with the wind. It took 4 hours. The trip back was into the wind. The trip back took 8 hours. What is the speed of the plane in still air? What is the speed of the wind?

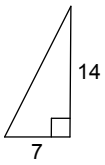
Round each to the place indicated.

87) 1.0758; tenths

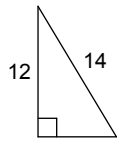
88) 2.874; hundredths

Find each missing length to the nearest tenth.

89)

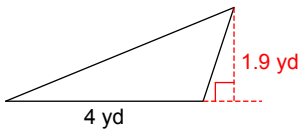


90)

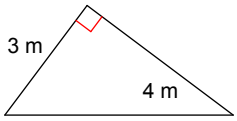


Find the area of each.

91)



92)



Evaluate each expression.

93) $15.9 + (-9.4)$

94) $(-22.46) + 0.8$