



KING SCHOOL

Summer Assignment

MAT 101: Algebra 1

Algebra I Summer Packet Answer Sheet

You must show your work – this means show every step. Any answers without supporting work will not receive credit. Show your work in an organized way. You should show your work on the packet itself; however, the final answer(s) must be copied onto this page.

Thank you!

- | | | |
|-----------|-----------|-----------|
| 1. _____ | 25. _____ | 49. _____ |
| 2. _____ | 26. _____ | 50. _____ |
| 3. _____ | 27. _____ | 51. _____ |
| 4. _____ | 28. _____ | 52. _____ |
| 5. _____ | 29. _____ | 53. _____ |
| 6. _____ | 30. _____ | 54. _____ |
| 7. _____ | 31. _____ | 55. _____ |
| 8. _____ | 32. _____ | 56. _____ |
| 9. _____ | 33. _____ | 57. _____ |
| 10. _____ | 34. _____ | 58. _____ |
| 11. _____ | 35. _____ | 59. _____ |
| 12. _____ | 36. _____ | 60. _____ |
| 13. _____ | 37. _____ | 61. _____ |
| 14. _____ | 38. _____ | 62. _____ |
| 15. _____ | 39. _____ | 63. _____ |
| 16. _____ | 40. _____ | 64. _____ |
| 17. _____ | 41. _____ | 65. _____ |
| 18. _____ | 42. _____ | 66. _____ |
| 19. _____ | 43. _____ | 67. _____ |
| 20. _____ | 44. _____ | 68. _____ |
| 21. _____ | 45. _____ | 69. _____ |
| 22. _____ | 46. _____ | 70. _____ |
| 23. _____ | 47. _____ | 71. _____ |
| 24. _____ | 48. _____ | |

Show ALL work, even for multiple choice problems.

Date _____

Evaluate each expression.

1) $1 + \frac{8}{7}$

A) $\frac{6}{7}$

B) $\frac{15}{7}$

C) $\frac{89}{35}$

D) $\frac{61}{35}$

2) $\frac{3}{2} - \frac{2}{5}$

A) $\frac{19}{10}$

B) $\frac{13}{10}$

C) $\frac{11}{10}$

D) $\frac{41}{10}$

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

A) $3\frac{3}{8}$

B) $2\frac{11}{20}$

C) $5\frac{25}{28}$

D) $4\frac{3}{4}$

4) $3\frac{1}{8} + \left(-3\frac{3}{8}\right)$

A) $2\frac{1}{4}$

B) $\frac{25}{28}$

C) $-\frac{1}{4}$

D) $-2\frac{13}{20}$

5) $(-1) - (-3) - (-8)$

A) 12

B) 14

C) 10

D) 9

6) $(-4) + (-2) + (-3)$

A) -10

B) -15

C) -5

D) -9

7) $1 + (-3) - 5$

A) -15

B) -7

C) -14

D) -8

8) $7 + 7 - (-6)$

A) 20

B) 23

C) 24

D) 15

Simplify each expression.

9) $2(-2 - m) + 5$

- A) $1 - 2m$ B) $-4m - 16$
C) $68 + 8m$ D) $-25 + 9m$

10) $-5 - 6(-4x + 8)$

- A) $-60 + 24x$ B) $-24 + 42x$
C) $-63 + 24x$ D) $-53 + 24x$

11) $-6(2x + 4) + 6$

- A) $-6 - 47x$ B) $-12x - 18$
C) $-9x - 14$ D) $-7 - 47x$

12) $4(-8 + 6p) + p$

- A) $-33 + 25p$ B) $41p - 35$
C) $-32 + 25p$ D) $35p - 35$

13) $7 + 8(4b + 4)$

- A) $7b + 36$ B) $39 + 32b$
C) $7b + 32$ D) $7b + 34$

Write the name of each decimal place indicated.

14) 8.009009

- A) millionths
B) tenths
C) ten-thousandths
D) millions

15) 1,166.084

- A) tenths B) ones
C) thousands D) tens

Round each to the place indicated.

16) 8.17293

- A) 8.17 B) 8.18
C) 8.16 D) 8.173

17) 20.395

- A) 20.3 B) 20
C) 20.38 D) 20.40

Evaluate each expression.

18) $(-4.24) + (-3.1)$

- A) -2.54 B) -7.34
C) -6.94 D) -9.64

19) $7.2 + (-7.4)$

- A) -0.2 B) 6.7
C) -2.4 D) 7.2

Find each product.

20) 6.6×-0.9

- A) -0.44 B) -7.64
C) -10.04 D) -5.94

21) 3×-3.9

- A) -0.9 B) -5.8
C) -6.8 D) -11.7

Evaluate each expression.

22) $2 - 1.4 \div 4.4$

- A) 3.28181818182
B) 1.68181818182
C) 0.271818181818
D) 2.98181818182

23) $5.3^2 - 4.8$

- A) 24.39 B) 29.24
C) 23.29 D) 20.89

Solve each equation.

24) $-23 = -8 + x$

- A) $\{184\}$ B) $\left\{2\frac{7}{8}\right\}$
C) $\{-15\}$ D) $\{-31\}$

25) $13 = 2 - n$

- A) $\{-11\}$ B) $\{15\}$
C) $\{11\}$ D) $\left\{6\frac{1}{2}\right\}$

26) $17 = v - (-20)$

- A) $\{-3\}$ B) $\left\{-\frac{17}{20}\right\}$
C) $\{-340\}$ D) $\{37\}$

27) $-10 = -10 + \frac{x}{1}$

- A) $\{-4\}$ B) $\{-20\}$
C) $\{-16\}$ D) $\{0\}$

28) $-3 + 10r = 157$

- A) $\{5\}$ B) $\{-3\}$
C) $\{16\}$ D) $\{-17\}$

Evaluate each using the values given.

29) $2mq$; use $m = 3$, and $q = 3$

- A) 24 B) 20
C) 18 D) 16

30) $4 + p + q$; use $p = 1$, and $q = 1$

- A) 3 B) 6
C) 0 D) 12

31) $p^2 - (p - (n - n))$; use $n = 2$, and $p = 4$

- A) 13 B) 18
C) 12 D) 16

List all positive factors of each.

32) 22

- A) 1, 22
B) 1, 2, 10, 22
C) 1, 2, 11, 14, 22
D) 1, 2, 11, 22

Write the prime-power factorization of each.

33) 22

- A) $2 \cdot 11$ B) 2^6
C) $2^2 \cdot 3 \cdot 5$ D) $2 \cdot 3 \cdot 11$

34) 27

- A) $2 \cdot 11$ B) 3^3
C) 5^2 D) $2 \cdot 5$

Find each quotient.

35) $\frac{9}{5} \div \frac{-1}{2}$

A) $5\frac{6}{7}$

B) $-3\frac{3}{5}$

C) $2\frac{5}{9}$

D) $-\frac{5}{18}$

36) $1\frac{9}{10} \div 1\frac{6}{7}$

A) $1\frac{3}{130}$

B) 4

C) $5\frac{1}{6}$

D) $-3\frac{37}{70}$

Find each product.

37) $1\frac{9}{10} \times -\frac{11}{10}$

A) $-2\frac{49}{100}$

B) $2\frac{9}{100}$

C) $-3\frac{39}{100}$

D) $-2\frac{9}{100}$

38) $-1\frac{5}{8} \times -\frac{3}{2}$

A) $-3\frac{1}{8}$

B) $4\frac{17}{112}$

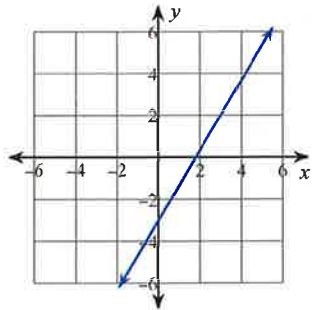
C) $-2\frac{7}{16}$

D) $2\frac{7}{16}$

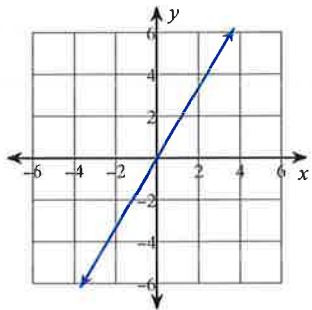
Sketch the graph of each line.

39) $y = \frac{5}{3}x$

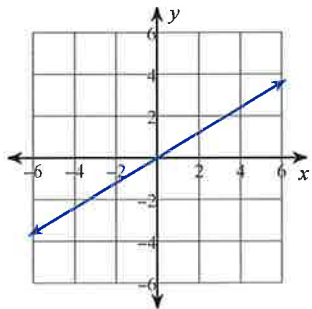
A)



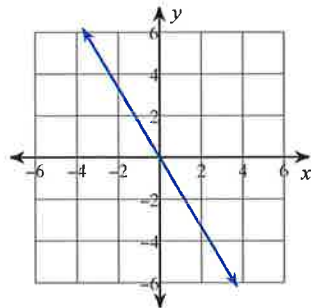
B)



C)

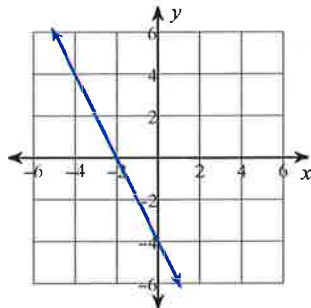


D)

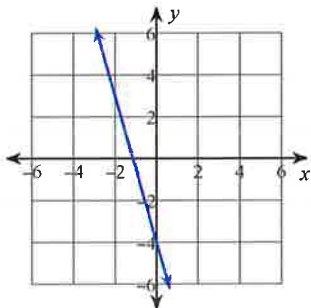


40) x -intercept = 2, y -intercept = -4

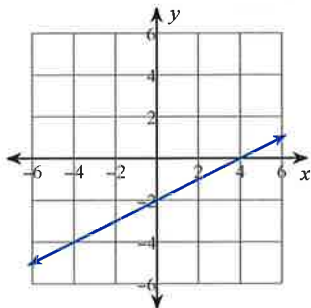
A)



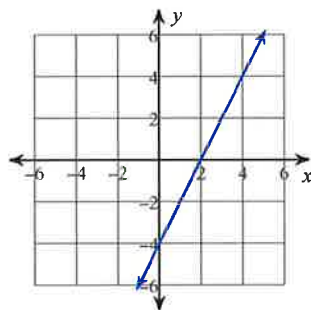
B)



C)



D)



Find the GCF of each.

41) 8, 32

- A) 2 B) 8
C) 24 D) 32

42) 44, 33

- A) 6 B) 11
C) 132 D) 55

Find the LCM of each.

43) 20, 36

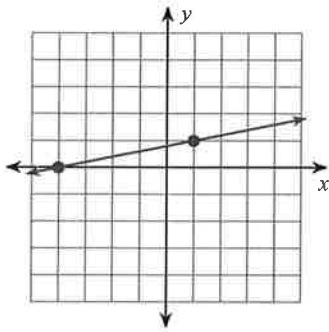
- A) 180 B) 720
C) 114 D) 4

44) 32, 24

- A) 480 B) 768
C) 8 D) 96

Find the slope of each line.

45)



- A) -5 B) $-\frac{1}{5}$
C) $\frac{1}{5}$ D) 5

Simplify each. Write your answer as a mixed number when possible.

46) $5\frac{4}{8}$

- A) $5\frac{1}{2}$ B) $5\frac{3}{6}$
C) $5\frac{2}{4}$ D) $2\frac{3}{4}$

Evaluate each expression.

47) $\frac{24}{(-5) - (8 - 10)}$

- A) -4 B) -16
C) -8 D) -18

48) $(-4) - 8 - (1 - (-9))$

- A) -28 B) -22
C) -20 D) -27

Write each as a decimal. Round to the thousandths place.

49) 8%

- A) 0.08 B) 0.8
C) 8 D) 0.008

Write each as a fraction.

50) 425%

- A) $34\frac{4}{5}$ B) $4\frac{3}{4}$
C) $4\frac{1}{4}$ D) 425

51) 3.23

- A) 323 B) $3\frac{23}{100}$
C) $3\frac{7}{25}$ D) $323\frac{1}{10}$

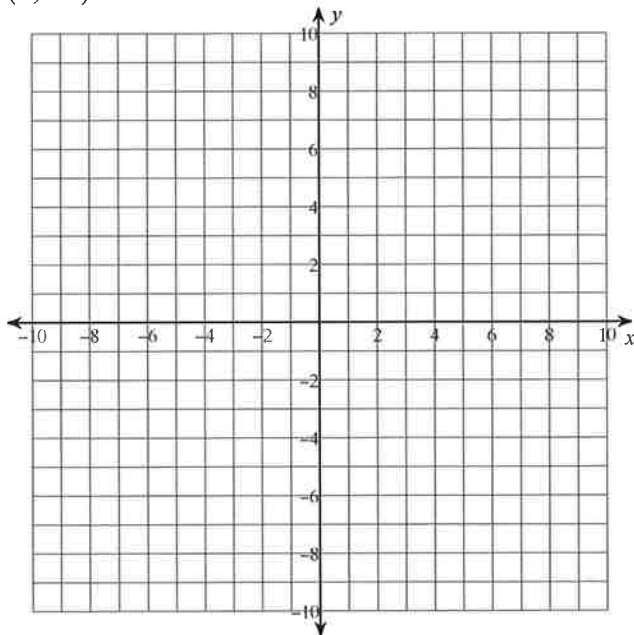
Write each as a percent. Round to the nearest tenth of a percent.

52) 0.134

- A) 93.4% B) 21.4%
C) 13.4% D) 0.1%

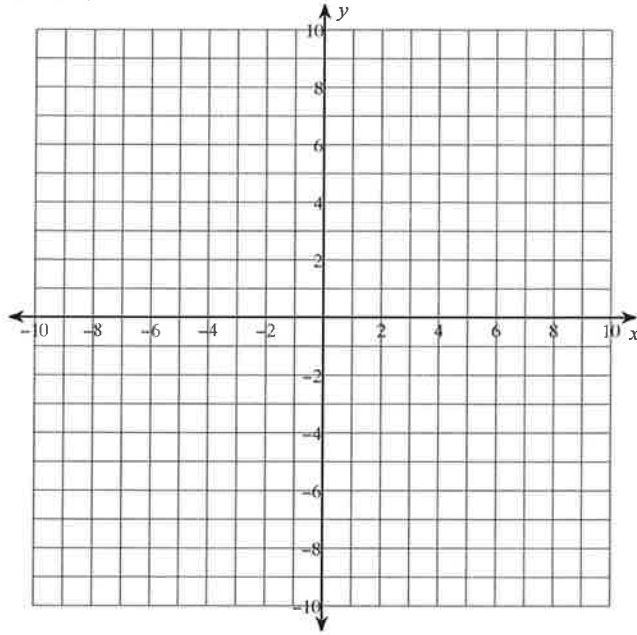
State the quadrant or axis that each point lies in.

53) (3, -6)



- A) I B) IV
C) II D) y-axis

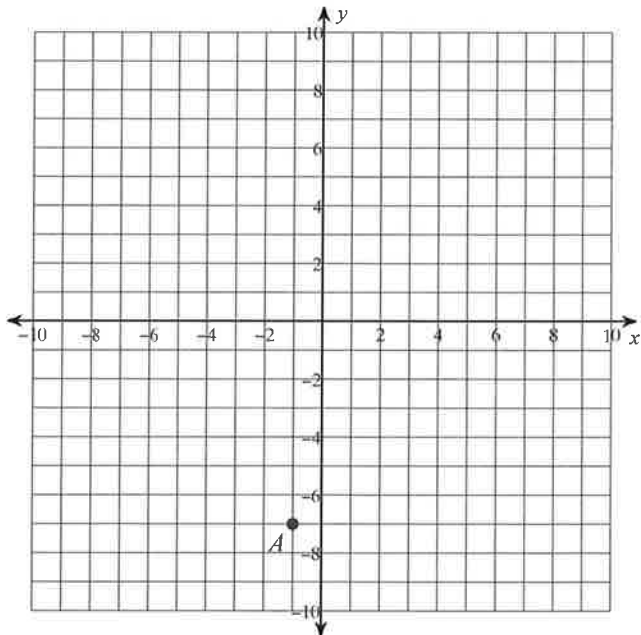
54) $(-1, 4)$



- A) I B) y-axis
C) IV D) II

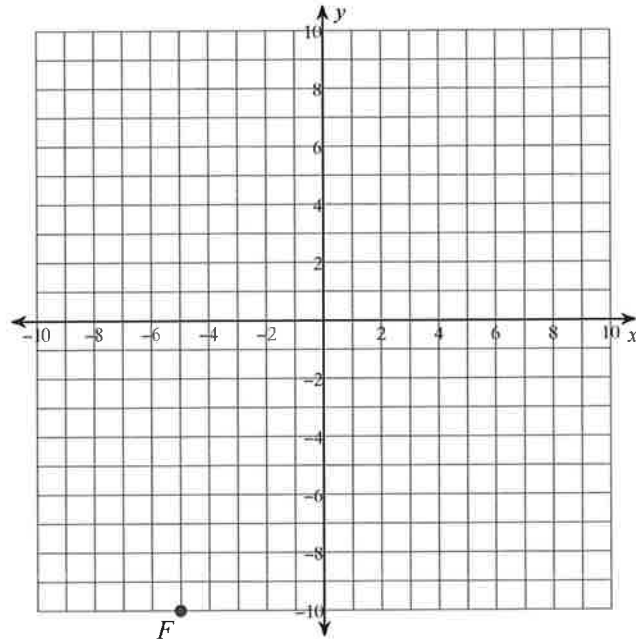
State the coordinates of each point.

55)



- A) $A(1, -7)$ B) $A(-1, -7)$
C) $A(-1, -8)$ D) $A(-7, -1)$

56)



- A) $F(-5, -10)$ B) $F(-6, -10)$
C) $F(-10, -5)$ D) $F(-5, -9)$

Answer each question and round your answer to the nearest whole number.

57) A painting is 3 in wide and 1 in tall. If it is enlarged to a width of 9 in, then how tall will it be?

- A) 3 in B) 27 in
C) 2 in D) 4 in

58) A rectangle is 3 in tall and 2 in wide. If it is enlarged to a width of 12 in, then how tall will it be?

- A) 72 in B) 20 in
C) 23 in D) 18 in

Round each to the place indicated.

59) 8.316957

- A) 8.3163 B) 8.3169
C) 8.3170 D) 8.3167

Write each number in scientific notation.

60) 8310

- A) 8.31×10^2 B) 8.31×10^{-3}
C) 8.31×10^1 D) 8.31×10^3

Write each number in standard notation.

61) 5.85×10^{-5}

- A) 0.0000585 B) 0.00585
C) 0.000585 D) 0.0585

Write each as a verbal expression.

62) r^3

- A) twice r B) r cubed
C) r minus 3 D) 3 cubed

63) $u + 10$

- A) u squared
B) the sum of u and 10
C) twice 10
D) 10 less than u

64) A colony of ants carried away 16 of your muffins. That was $\frac{8}{9}$ of all of them! With how many did you start?

- A) 18 B) 14.2222
C) 19 D) 16

Evaluate each expression.

65) $(6 + 10) \div 4 + 2 \times 4 \times 3$

66) $1\frac{1}{4} - \left(\frac{5}{6} - \frac{2}{3}\right)$

Solve each equation.

67) $2 = \frac{2 + m}{5}$

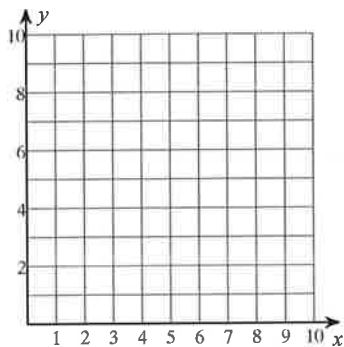
68) $35 = -9 - 4v$

Evaluate each using the values given.

69) $4 + h - \frac{h}{6} + j$; use $h = 6$, and $j = 6$

Plot each point.

70) $N(5, 8)$ $M(6, 2)$ $L(1, 9)$
 $K(0, 3)$ $J(4, 8)$



Simplify each expression.

71) $-7 - 2(3n - 6)$