

# Algebra 1 ~ First Semester Final Exam Review Key

1.  $16 \leq a \leq 22$

2. 13

3. -11.5

4. -23

5. -5

6.  $\frac{11}{15}$

7. 10

8. -11

9. 10

10. 4

11.  $-7y - 15$

12.  $12a + 2$

13.  $8k - 12g$

14. 55

15. 63

16. -6

17. 5

18. -42

19. YES

20. NO

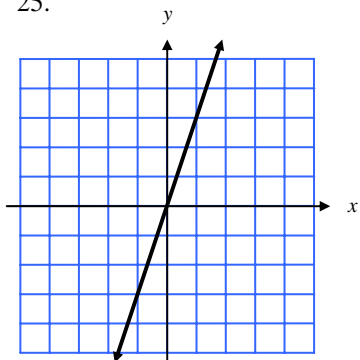
21. 5

22.  $-\frac{10}{7}$

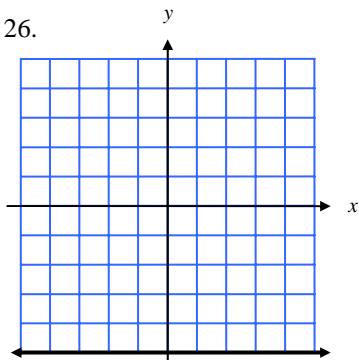
23.  $-\frac{1}{2}$

24.  $y = -\frac{1}{2}x + 1$

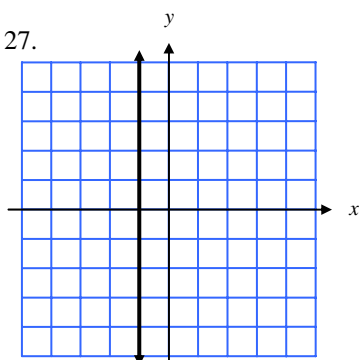
25.



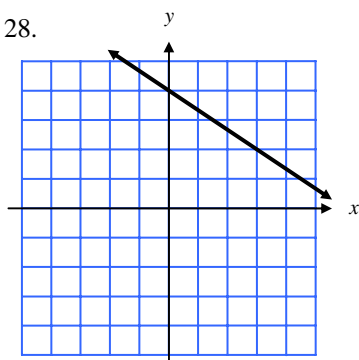
26.



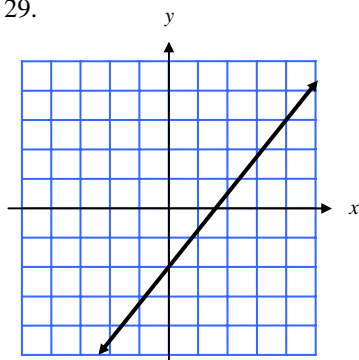
27.



28.



29.



30.  $y = 5x + 11$

31.  $y = \frac{1}{4}x - 4$

32.  $y = x + 5$

33.  $y = 3x + 22$

34. 64

35.  $-\frac{63}{2}$

36. 10

37. 6

38.  $\infty$  solutions or identity

39. 2

40. 5

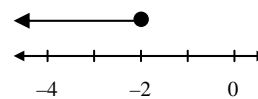
41. no solution

42. 4

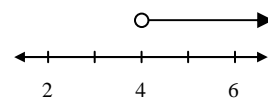
43. 120

44.  $\frac{4}{3}$

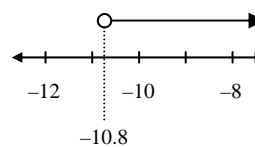
45.  $d \leq -2$



46.  $t > 4$



47.  $a > -10.8$



48.  $\frac{5}{2}$

49. 36

50.  $\frac{4}{3}$

51. 3

52. mean = 13.4

median = 13

mode = 13

53. mean = 19.75

median = 19

mode = 17 and 18

54. (0, -9)

55. (-2, 2)

56. (3, -1)

57. Not a solution ...  $2 \neq 5(-5) + 7$

58. Solution ...  $-3 = -\frac{1}{3}(6) - 1$

59.  $50 + 12n = 250$

$n$  = the number of rounds of golf

She can play 16 times

60.  $21p + 3 = 45$

$p$  = the cost of one plant

\$2 per plant

61.  $-3^\circ\text{C}$

62. 10:00 am and 5:00 pm

63.  $-6^\circ\text{C}$

64. 6.5

65. 22.8

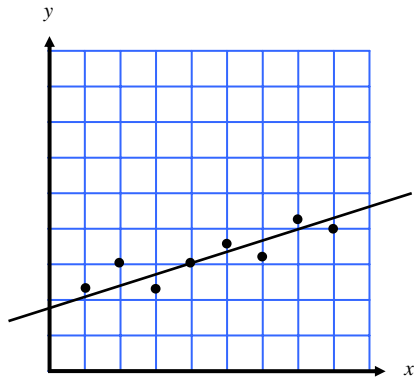
66. 54

67. Not direct variation

68. Direct variation;

$k = 2.1$ ;  $y = 2.1x$

69. a)



b)

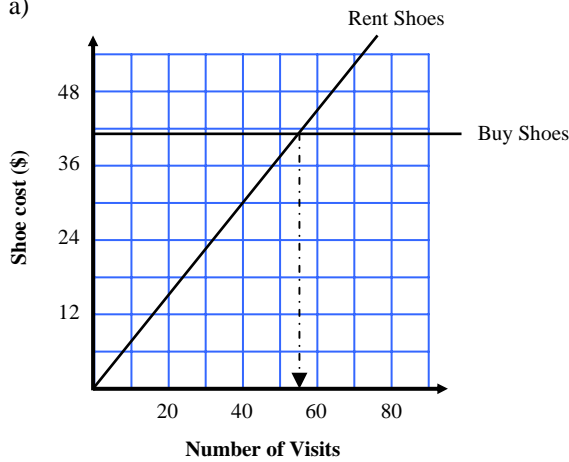
c) Answers may vary:  $y = \frac{1}{3}x + 1\frac{2}{3}$

70. a)

A	B
125	80
175	160
225	240
275	320
325	400

b) 5 hours

71. a)



b) About 55 visits based on the graph.

72. Equation:  $30 + 7.5x = 10.5$ ; 10 videos

73.  $10 \leq t \leq 70$

74.  $t < 5$  and  $t > 75$

75.  $0.6n + 2 < 44$ ;  $n < 70$ ; 69 books

76.  $120^\circ$

77.  $140^\circ$

78. 20

79. 18

80.  $XYZW$  perimeter = 36;  $QRSP$  area =  $74\frac{2}{3} \approx 74.7$

81.  $EFGH$  perimeter = 20;  $AB = 14$ ;  
 $EF = 7$ ;  $ABCD$  area = 84

82.  $\frac{1}{5} = 0.2 = 20\%$

83.  $\frac{2}{5} = 0.4 = 40\%$

84.  $\frac{7}{30} \approx .233 = 23.3\%$

85.  $\frac{1}{2} = 0.5 = 50\%$

86.  $\frac{3}{4} = 0.75 = 75\%$