**Inequalities**

**Solve**

**1.**

**2.**

**3.**

A. B. C. D.

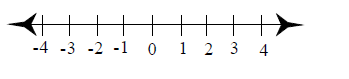
**4.**

A. B. C. D.

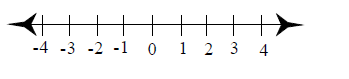
**5.**

A. B. C. D.

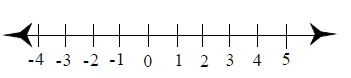
**Solve and graph on a number line.**



**6.**



**7.**

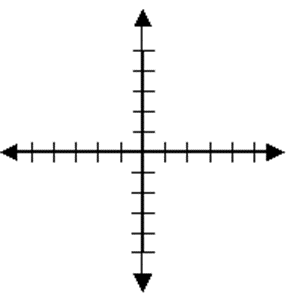
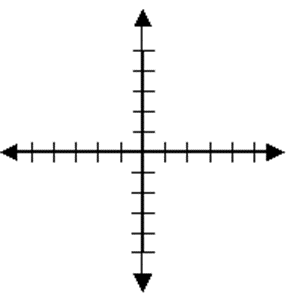


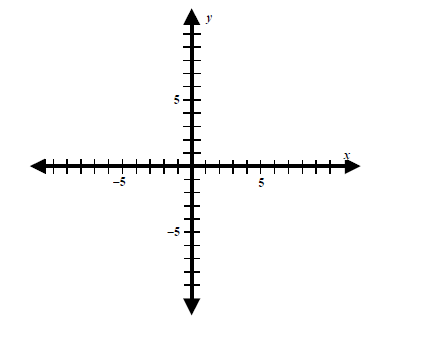
**8.**  or



**9.**

**Sketch the graph of the inequality.**

**10.**  **11.**

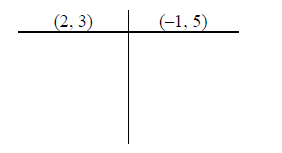


**12.**

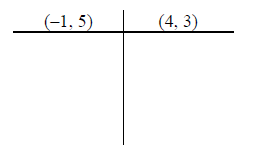
**13.** A gym membership costs $50 a month. If you are not a member, it costs $5 a day. How many times

do you need to go to the gym in a month to save money by getting a membership?

**Systems of Equations**

**Is each ordered pair a solution of the system of linear equations?**

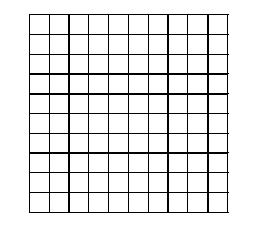
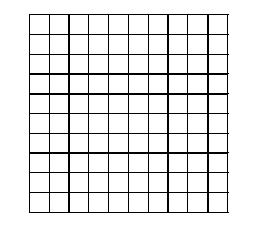
**14.**



**15.**

**Graph and check to solve the linear system.**

**16. 17.**



**Solve the linear system.**

**18.**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**19.**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**20.**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**21.**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Applications. Solve using systems of equations.**

**22.** A music store is selling compact discs for $11.50 and $7.50. You buy 12 discs and spend a total

of $106. How many compact discs that cost $11.50 did you buy?

**23.** You are selling tickets for a high school concert. Student tickets cost $4 and general admission

tickets cost $6. You sell 450 tickets and collect $2340. How many of each type of ticket did you sell?

**24.** Your school committee is planning an after-school trip by 193 people to a competition at

another school. There are eight drivers available and two types of vehicles, school buses and

minivans. The school buses seat 51 people each, and the minivans seat 8 people each. How

many buses and minivans will be needed?

**Solve the system using the method of your choice and tell how many solutions the system has.**

**25.**

**26.**

**Simplify**

27.  28. 

29. 30. 

31.  32. 

33. **Simplify:** 

A.  B.  C.  D. 

34. **Simplify:** 

A.  B.  C.  D. 

35. **Simplify:** 

A. B. C. D.

36. **Simplify:** 

A.  B. 

C.  D. 

37. **Simplify:** 

38. **Simplify:** 

39. **Simplify:** 

A. B. C. D.

40. **Simplify:** 

41. **Simplify:** 

42. **Simplify:** 

43. **Simplify:**

A. B.

C. D.

44. **Simplify:**

A. B.

C. D.

45. **Simplify:**

46. **Simplify:**

47. **Simplify:**

48. **Simplify:**

49. **Simplify:** 3(2 – 5)2 = \_\_\_\_\_\_\_\_\_\_\_

**Factor completely.**

50. -4x3 – 18xy = \_\_\_\_\_\_\_\_\_\_

51.

52.

53.

54.

55.

56.

57.

A. prime B.

C. D.

58. **Factor:**

A. B.

C. D.

59. **Factor:**

A. B.

C. D.

60. If is factored completely, one of the factors is:

A. B. C. D.

61. **Factor:**

A. B.

C. D. none of these

62. If is factored completely, one of the factors is:

A. B.

C. D.

63. **Factor:**

A. B.

C. D. Prime

64. **Factor:**

A. B.

C. D. Prime

65. **Factor:**

A. B.

C. D.

**Simplify:**

66. 

67. 

68. 

69. 

70. 

71. 

72. 

73. 

**Solve.**

74. =

75. =

**Statistics and Data Analysis**

76. The following stem and leaf plot represents the final exam scores of 15 students.

|  |  |
| --- | --- |
| 9 | 7 4 4 3 0 |
| 8 | 9 9 8 4 1 |
| 7 | 7 7 |
| 6 | 8 6 |
| 5 | 5 |

1. Find the mean, median, and mode for the set of data.
2. Find the probability that a student picked at random will earn an A on the exam.
3. Find the odds that a student picked at random will earn a B on the exam.

77. The following box and whiskers plot shows the attendance at a movie theater for the past 20 days.



Which statements about the data are **NOT** true?

1. The median attendance is 25.
2. During the best day, 39 people attended the movies.
3. Less than 25 people attended the movies 50% of the time.
4. The interquartile range is 12.
5. More than 25 people attended the movies 75% of the time.

78. If you roll a regular six-sided die and flip one coin, what is the probability of rolling a 5 and flipping a tails?

79. If you roll a number cube with numbers 1–8 and spin a spinner with numbers 1-4, what is the probability of rolling an even number and spinning a prime.

80. The average score on 20 math tests is an 80%. If one student scored a 48%, what would the average be if you did not count that test (*round to the nearest tenth*)? What is the difference between the two averages?