Summer Assignment for Students Going into
8th or 9th grade Algebra I, part 1

Directions:

1. Complete the following problems in this packet in the space provided
without a calculator. If you need more space, attach your work. Show all
work for full credit.

2. If you need instruction or review of the topics in this packet, go to
http://www.khanacademy.org/ . These are excellent videos that will re-teach
and remind you how to go about the problems in this packet.

3. These problems should be a good review of the concepts that are necessary
for you to know at the start of the course you are entering.

4. Bring this completed packet of problems, including your work, with you to math
class on the first day of school. It will be collected and graded.

5. Be sure you understand this material thoroughly and be prepared to take a
30-point quiz on this material on the third day of school.

Summer assignment for students going into Algebra I, part 1

What is the value of the underlined digit in the following numbers:

    1.   6,6<u>6</u>5,162   2. 0.09<u>7</u>85

Round the following numbers to the given place value:

    3.   10.065 to the nearest hundredth   4. 837.432 to the nearest whole number

Fill in the blank with the correct symbol: $>$ *or* $<$ *or* =

5. $7 \underline{\qquad} \dfrac{15}{2}$ 6. $-8 \underline{\qquad} -3$

7. $9 \underline{\qquad} \dfrac{27}{3}$ 8. $-\dfrac{1}{2} \underline{\qquad} -\dfrac{3}{4}$

9. $-1.8 \underline{\qquad} -1.3$ 10. $\dfrac{1}{4} \underline{\qquad} 0.25$

Order the following sets of numbers from least to greatest:

11. -10, 3, 3.4, -7, 8

12. 0.73, 0.7, 0.45, -0.63, -0.1

13. $2\dfrac{2}{3}$, 2.6, 2.04, $\dfrac{5}{2}$, 2

Add the following fractions. Write answers in simplest form.

14. $\dfrac{1}{3} + \dfrac{1}{3}$

15. $\dfrac{3}{4} + \dfrac{1}{6}$

16. $1\dfrac{1}{4} + \dfrac{3}{2}$

Subtract the following fractions. Write answers in simplest form.

17. $\dfrac{5}{6} - \dfrac{1}{6}$

18. $2\dfrac{1}{2} - \dfrac{1}{4}$

19. $\dfrac{4}{5} - \dfrac{1}{2}$

Multiply the following fractions. Write answers in simplest form.

20. $2\dfrac{1}{3} \cdot \dfrac{2}{5}$

21. $\dfrac{4}{5} \cdot \dfrac{2}{3}$

22. $\dfrac{5}{6} \cdot \dfrac{2}{3}$

Divide the following fractions. Write answers in simplest form.

23. $\dfrac{1}{2} \div \dfrac{3}{4}$

24. $\dfrac{4}{5} \div \dfrac{3}{2}$

25. $1\dfrac{3}{4} \div \dfrac{3}{4}$

Convert the following fractions to decimals. Round answers to the nearest hundredth when necessary.

26. $\dfrac{4}{5}$

27. $\dfrac{3}{7}$

28. $\dfrac{5}{8}$

Convert the following decimals to fractions. Write answers in simplest form.

29. $0.125 =$

30. $0.\overline{3} =$

31. $0.05 =$

Convert the following decimals to percents.

32. 0.65 =   33. 2.85 =   34. 0.08 =

Convert the following percents to decimals. Round to the nearest hundredth when necessary.

358 % =   36. 7.12 % =   37. 23.78 % =

Convert the following fractions to percents. Round to nearest hundredth when necessary.

38. $\dfrac{2}{5}$ 39. $\dfrac{3}{4}$ 40. $\dfrac{2}{3}$

Convert the following percents to fractions.

41. 20 % =   42. 8 % =   43. 75 % =

Solve:

44. What number is 15% of 60?

45. 66 is 11% of what number?

46. 308 is what percent of 350 ?

47. A $150 jacket is going on sale for a 25% discount. How much will the jacket cost on sale?

48. Jim bought 3 CD's at a cost of $ 14.99 each. What will he pay, including 7% sales tax?

Perform the indicated operations:

49. $9 - 20 =$

50. $-20 + (-3) =$

51. $40 \cdot (-2) =$

52. $-4 - (-3) =$

53. $36 + (-11) =$

54. $37 - 37 =$

55. $(-3) \cdot (-2) =$

56. $(-22) - 2 =$

57. $(-22) + (-2) =$

58. $9 \cdot (7 + 5 - 3) =$

59. $8 - 33 + (2 - 25) + 48 =$

60. $45 + 9 + 6 \cdot 5 =$

61. $5 + (21 + 7) \cdot 2 =$

62. $27 + 3 \cdot 2 - 7 =$

63. Find the mean, median, mode & range for the numbers:

168, 149, 27, 44, 11, 98, 44, 138, 74, 149, 44, 110

Mean ____   Median _____   Mode __   Range _____

Solve each problem:

64. On a cold Chicago day the temperature was 7 degrees. Over the next three hours it dropped 4 degrees per hour. What was the temperature after three hours?

65. A pet shelter noticed that during one month they adopted twice as many dogs as they did cats. If they adopted 17 cats, how many dogs were adopted?

66. In the first game of the season, the Lancers scored 18 points. In the second game they scored 21 points. What was their average score for the two games?
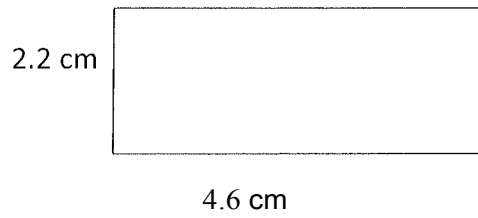
Solve each equation:

67. $x + 22 = 105$

68. $\dfrac{x}{4} = 24$

69. $x - 7 = 30 + 12$

70. $30x = 420$

71. Find the underline perimeter of the rectangle:

2.2 cm

4.6 cm

72. Find the area of the rectangle:

6.5 m

4.7 m