Name _____

Grade 6 to 7th

Must show all work! (Attach another paper if needed)

Write each in standard form.

1. $(5 \times 10^4) + (6 \times 10^1) + (7 \times 10^{-2})$

2. $(2 \times 10^5) + (3 \times 10^3) + (3 \times 10^0)$

Order from greatest to least.

3. 7.21, 7, 7.2, 7.05

4. 0.54, 0.5469, 0.5462, 0.559

Evaluate each equation when $c = 0.5$ and $d = 30$.

5. $9 + c + d$

6. $10d \div c$

7. $d \div c \bullet 300$

Multiply.

8. $(6.2)(9.4)$

9. $-25(14)$

10. $-16(-11)$

Divide.

11. $30,139 \div 93$

12. $8.93 \div 4.7$

13. $-80 \div 5$

Write in scientific notation.

14. 35,500,000

15. 248,000,000

16. 8,050,000

Simplify.

17. $12 - 3 \bullet 2 + 2^3$

18. $10 \bullet 3 + (48 \div 6)^2 \bullet 0.4$

Write and solve an equation for each problem.

19. Juan buys 4 DVDs at $15 each. How much does Juan pay in all?

20. A ribbon is 165 cm long. It is cut into 15 equal pieces. How long is each piece?

Find the prime factorization in exponential form.

21. 36

22. 189

23. 60

Find the greatest common factor.

24. 80 and 100

25. 48 and 84

26. 14, 49, and 105

Write in order from least to greatest.

27. $-2\frac{3}{4}, 4.5, -1\frac{1}{3}$

28. $\frac{3}{2}, -3\frac{1}{2}, 4$

29. $-\frac{3}{5}, -1.2, -6\frac{1}{2}$

Find the value of the variable. Use the properties of addition.

30. $z + \frac{5}{7} = \frac{5}{7} + \frac{1}{7}$

31. $\frac{3}{16} + \left(\frac{5}{16} + 0\right) = \frac{3}{16} + n$

Add or subtract.

32. $\frac{1}{12} + \frac{2}{3} + \frac{1}{4}$

33. $10\frac{1}{4} - 5\frac{2}{3}$

34. $8\frac{1}{6} - 3\frac{3}{4} + 2\frac{1}{2}$

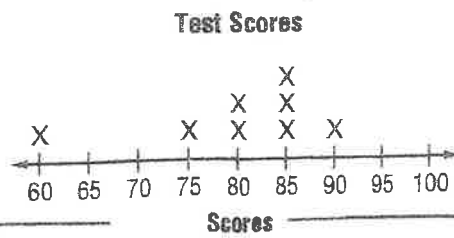**Multiply or divide.**

35. $\frac{7}{9} \cdot 27 \cdot 4$

36. $1\frac{1}{3} \div 2\frac{2}{5}$
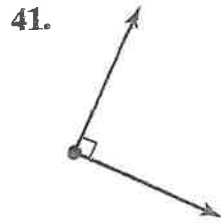
37. $3\frac{1}{4} \div 1\frac{1}{2}$

Use the line plot to answer questions 38 and 39.

Test Scores

38. What score is an outlier? _____

39. What is the mean? _____

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                              X
                         X    X
  X               X   X  X    X
  +---+---+---+---+---+---+---+---+---+
  60  65  70  75  80  85  90  95  100
                 Scores
```

Classify each angle as right, acute, obtuse, or straight.

40.

41.

42.

Find the value of *n*.

43. $\dfrac{12}{4} = \dfrac{18}{n}$

44. $8 : 3 = n : 12$

45. $17 : 3 = n : 1.5$

Write each fraction as a percent and a decimal.

46. $\dfrac{6}{10}$

47. $\dfrac{9}{20}$

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

Find the percent of each number.

49. 30% of 30

50. 63% of 900

51. 37.5% of 112

Compare. Write <, =, or >.

52. 4.8 cm _____ 0.48 mm

53. 6 gal _____ 28 qt

54. 76 fl oz _____ $9\frac{1}{2}$ c

5. Lynette has 32 red buttons and 24 blue buttons. If she wants to place the buttons in equal groups without any buttons left over, what is the greatest number of groups Lynelle can make?

_____ _____

6. Rachel is 2 times as tall as Kendall. Rich is 3 inches taller than Rachel. Brian is 74 inches tall and 1 inch shorter than Rich. How tall is Kendall?

a. 31 in.   b. 36 in.   c. 124 in.   d. 128 in.

7. The team sells 52 t-shirts to raise money for new equipment. Each t-shirt costs $6.01 to make and it sells for $10.00. How much money does the team raise?

a. $312.52   b. $20.748   c. $31.72   d. $207.48.