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Indicate the answer choice that best completes the statement or answers the question.

Find the greatest common factor of each set of numbers.

___ 1. 27, 36, 72

a. 9 b. 18

c. 8 d. 216

___ 2. 8, 28

a. 4 b. 8

c. 56 d. 6

Find the least common multiple of each set of numbers.

___ 3. 36, 45

a. 45 b. 360

c. 180 d. 9

Write each ratio as a fraction in simplest form.

___ 4. 24 brown socks out of 39 socks

a. $\frac{24}{39}$ b. $\frac{8}{13}$

c. $\frac{13}{8}$ d. $\frac{39}{24}$

___ 5. 2 tabbys out of 16 cats

a. $\frac{8}{1}$ b. $\frac{16}{2}$

c. $\frac{2}{16}$ d. $\frac{1}{8}$

Write each rate as a unit rate.

Indicate the answer choice that best completes the statement or answers the question.

___ 6. 108.4 miles for 19.8 gallons

a. 11 miles per 2 gallons b. 0.2 miles per gallon

c. 11 miles per gallon d. 5.5 miles per gallon

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7. 2 bags of potato chips for $2.36

_____

_____

Indicate the answer choice that best completes the statement or answers the question.

Use the ratio tables given to solve each problem.

___ 8. Tommy can ride his bicycle 4.5 miles in 15 minutes. How many miles can he ride in 75 minutes?

Number of Miles	4.5				?
Time (min)	15				75

a. 9 b. 13.5

c. 22.5 d. 27

Write each decimal as a fraction or mixed number in simplest form.

___ 9. 0.3

a. $\frac{16}{23}$ b. $\frac{1}{2}$ c. $1\frac{4}{5}$ d. $\frac{3}{10}$

___ 10. 28.873

a. $28\frac{873}{1000}$ b. $\frac{2}{3}$ c. $23\frac{7}{11}$ d. $28\frac{679}{1000}$

Write each fraction or mixed number as a decimal.

___ 11. $16\frac{8}{11}$

a. $16.\overline{09}$ b. $16.\overline{72}$ c. $18.\overline{1}$ d. 6.1875

___ 12. $\frac{1}{3}$

a. $0.08\overline{3}$ b. $0.\overline{3}$ c. 0.12 d. 3

Write each percent as a fraction in simplest form.

___ 13. 32%

a. $3\frac{1}{5}$ b. $\frac{32}{100}$

c. $3\frac{1}{8}$ d. $\frac{8}{25}$

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Write each fraction as a percent.

___ 14. $\frac{2}{5}$

a. 40% b. 2%

c. 0.4% d. 10%

Express the percent as a decimal.

___ 15. 37%

a. 0.37 b. 3.7

c. 37 d. 0.037

Write each percent as a fraction in simplest form.

___ 16. 162%

a. $\frac{50}{81}$ b. $16\frac{1}{5}$

c. $\frac{162}{100}$ d. $1\frac{31}{50}$

___ 17. 0.8%

a. $\frac{8}{10{,}000}$ b. $\frac{8}{1000}$

c. 125 d. $\frac{1}{125}$

Write the percent as a decimal.

___ 18. 0.4%

a. 0.0004 b. 0.04

c. 40 d. 0.004

Write each decimal as a percent.

___ 19. 10.9

a. 10900% b. 0.109%

c. 1090% d. 109%

Replace each ◯ with <, >, or = to make a true statement.

___ 20. $\frac{1}{2}$ ◯ $\frac{3}{4}$

a. = b. < c. >

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___ 21. $\frac{7}{20}$ ◯ 0.87

a. < b. >

c. =

___ 22. Which statement is true?

a. $\frac{7}{8} < 0.99$ b. $31\% > \frac{7}{8}$

c. $\frac{2}{5} < 31\%$ d. $0.99 < 31\%$

Order the set of numbers from least to greatest.

___ 23. $\frac{31}{50}$, 0.5, 0.31

a. 0.31, $\frac{31}{50}$, 0.5 b. $\frac{31}{50}$, 0.5, 0.31

c. 0.31, 0.5, $\frac{31}{50}$ d. $\frac{31}{50}$, 0.31, 0.5

___ 24. 50 is 25% of what number?

a. 25 b. 50

c. 200 d. 400

___ 25. Molly does 15% of her homework in study hall. If she spent 45 minutes on homework in study hall, how much time in minutes does she need to spend on homework altogether?

a. 3 b. 15

c. 45 d. 300

___ 26. What number is 80% of 50?

a. 25 b. 40

c. 80 d. 160

Find each sum.

___ 27. 3.74 + 3.2

a. 5.94

b. 7.04

c. 0.54

d. 6.94

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Find each difference.

___ 28. 91.6 – 3.87

a. 91.213

b. 87.83

c. 87.73

d. 95.47

___ 29. Estimate the product. Round to the nearest whole number.

18.7 × 1.9

a. 38

b. 21

c. 35.53

d. 40

Use estimation to determine whether the answer is reasonable.

___ 30. 80.3 × 7.3 = 560

a. No. A reasonable estimate is 1000.

b. No. A reasonable estimate would be 586.19.

c. No. A reasonable estimate is 610.

d. Yes. The answer is reasonable.

___ 31. Multiply.

10.07 × 10

a. 1.007

b. 100

c. 100.7

d. 100700

___ 32. Find the product.

11.97 × 0.001

a. 0.01197

b. 0.012

c. 11970

d. 1.197

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___ 33. A bamboo plant was 7 inches tall on day 1, 18 inches tall on day 2, and 29 inches tall on day 3. Describe the pattern and predict how tall the bamboo plant will be on day 4.

a. add 10 inches; 39 inches
b. add 12 inches; 41 inches
c. add 9 inches; 38 inches
d. add 11 inches; 40 inches

Find each quotient.

___ 34. 196 ÷ 27

a. 7 R 7
b. 10 R 7
c. 7 R 22
d. 6 R 16

___ 35. Divide.

40.5 ÷ 5

a. 202.5
b. 8.1
c. 8.4
d. 0.81

___ 36. 7.315 ÷ 0.7

a. 1.045
b. 10.45
c. 10.55
d. 10.46

37. Each month, a dairy farm gives away 105 pounds of cheese to a charity and sells the rest. In 6 months the farm sells 4,218 pounds of cheese. How many pounds of cheese does it make in one month?

_____

_____

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Indicate the answer choice that best completes the statement or answers the question.

Estimate the product using compatible numbers.

___ 38. $\frac{3}{5} \times \frac{1}{17}$

a. 1

b. 0

c. $\frac{3}{5}$

d. $\frac{1}{2}$

Multiply. Write in simplest form.

___ 39. $\frac{1}{2} \times 96$

a. 384

b. $12\frac{1}{2}$

c. 48

d. $\frac{1}{192}$

Multiply. Write in simplest form.

___ 40. $\frac{5}{8} \times \frac{1}{3}$

a. $\frac{5}{11}$

b. $\frac{15}{8}$

c. $\frac{5}{24}$

d. $\frac{8}{15}$

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___ 41. $2\frac{3}{4} \times 1\frac{1}{2}$

a. $4\frac{1}{8}$

b. $\frac{8}{33}$

c. $1\frac{5}{6}$

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

___ 42. 5 gal = ____ qt

a. 1.25

b. 10

c. 40

d. 20

Divide. Write in simplest form.

___ 43. $5 \div \frac{3}{4}$

a. $\frac{3}{20}$

b. $5\frac{3}{4}$

c. $6\frac{2}{3}$

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

___ 44. $\frac{2}{5} \div \frac{4}{5}$

a. $\frac{1}{2}$

b. $\frac{8}{25}$

c. 2

d. $1\frac{1}{5}$

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Find the quotient. Write in simplest form.

___ 45. $1\frac{2}{9} \div 1\frac{1}{6}$

a. $\frac{21}{22}$

b. $1\frac{23}{54}$

c. $2\frac{7}{18}$

d. $1\frac{1}{21}$

46. A bucket contains $\frac{8}{9}$ gallon of water. If Kelsey uses $\frac{4}{7}$ of the water in the bucket to water her plants, about how many gallons did she use?

_____

_____

47. On a math test with 52 questions, Kim solved $\frac{3}{4}$ of the questions correctly. How many questions did Kim solve *incorrectly*?

_____

_____

48. Multiply $1\frac{3}{5} \times 4\frac{5}{6} \times 2\frac{1}{4}$. Write your answer in simplest form.

_____

_____

Indicate the answer choice that best completes the statement or answers the question.

___ 49. What integer represents a gain of 3 yards?

a. $\frac{1}{3}$

b. 0.3

c. –3

d. 3

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Evaluate each expression.

___ 50. |9|

a. 1

b. (–9)

c. 9

d. –9

Replace each ◯ with <, >, or = to make a true statement.

___ 51. –8 ◯ –8

a. >

b. =

c. <</variable>

___ 52. Order –10, 9, 1, and –5 from least to greatest.

a. –10, –5, 1, 9

b. 9, 1, –5, –10

c. –10, –5, 9, 1

d. –5, –10, 1, 9

Write each fraction or mixed number as a decimal. Use bar notation if the decimal is a repeating decimal.

___ 53. $\frac{3}{20}$

a. $6.\overline{666}$

b. 0.15

c. 0.05

d. 0.2

___ 54. $4\frac{1}{13}$

a. 0.2452830189

b. $0.\overline{076923}$

c. 0.13

d. $4.\overline{076923}$

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___ 55. $\frac{15}{16}$

a. 1.0666666667
b. 0.1516
c. 0.9375
d. –0.9375

___ 56. Write $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$ using an exponent.

a. 3×7
b. 3^3
c. 7^3
d. 3^7

Find the value of each expression.

___ 57. $36 \div 6 + 2 \times 2$

a. 9
b. 10
c. 12
d. 16

___ 58. $18 \div 6 \times 3 + 9 - 7$

a. 3
b. 14
c. 11
d. 29

___ 59. $3g + 5 + 9$ if $g = 5$

a. 57
b. 19
c. 29
d. 39

___ 60. Use the Distributive Property to rewrite $6(x + 11)$.

a. $6x + 17$
b. $6x + 66$
c. $6x + 11$
d. $x + 66$

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Write each phrase as an algebraic expression.

61. 7 more than a number

62. a number divided by 6

Indicate the answer choice that best completes the statement or answers the question.

Solve each equation. Use models if necessary. Check your solution.

___ 63. $d + (-5) = 10$

a. –15 b. 5

c. –5 d. 15

___ 64. $b - 7 = 4$

a. 3 b. –3

c. –11 d. 11

Solve each equation. Check your solution.

___ 65. $-14p = -112$

a. –126 b. –98

c. 8 d. 1568

___ 66. $0.7 = \frac{y}{14.7}$

a. 14 b. 21

c. 0.7 d. 10.29

___ 67. $-154 = -14r$

a. –140 b. 11

c. 2156 d. –168

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___ 68. $4 = \frac{x}{20}$

a. 4 b. 5
c. 80 d. 16

Solve each equation. Use models if necessary. Check your solution.

___ 69. $-12 = -6 + k$

a. 6 b. –6
c. –18 d. 18

___ 70. $6 = g - 4$

a. 2 b. 10
c. –2 d. –10