

NAME _____

2021 SUMMER BASIC SKILLS PACKET (to be completed by all levels).

Do not use a calculator to complete this packet. A BASIC SKILLS TEST will be given during the first few weeks of school.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Find another name for the given number, but with the denominator indicated.

1) $\frac{3}{7} = \frac{?}{21}$ 1) _____
A) $\frac{6}{21}$ B) $\frac{11}{21}$ C) $\frac{21}{21}$ D) $\frac{9}{21}$

2) $\frac{12}{13} = \frac{?}{169}$ 2) _____
A) $\frac{156}{169}$ B) $\frac{25}{169}$ C) $\frac{144}{169}$ D) $\frac{12}{169}$

Simplify.

3) $\frac{4}{8}$ 3) _____
A) $\frac{4}{2}$ B) $\frac{1}{2}$ C) $\frac{2}{1}$ D) $\frac{1}{8}$

4) $\frac{28}{36}$ 4) _____
A) $\frac{4}{9}$ B) $\frac{7}{4}$ C) $\frac{28}{36}$ D) $\frac{7}{9}$

Multiply and simplify.

5) $\frac{1}{8} \cdot \frac{4}{9}$ 5) _____
A) $\frac{4}{72}$ B) $\frac{1}{18}$ C) $\frac{5}{17}$ D) $\frac{4}{13}$

6) $\frac{9}{10} \cdot \frac{48}{180}$ 6) _____
A) $\frac{19}{600}$ B) $\frac{432}{1800}$ C) $\frac{3}{10}$ D) $\frac{6}{25}$

7) $15 \cdot \frac{3}{5}$

A) $\frac{45}{5}$

B) $\frac{19}{5}$

C) 12

D) 9

7) _____

Solve.8) There are 75 students in Jose's class. $\frac{3}{5}$ of the students are science majors. How many students are science majors?

A) 45 students

B) 30 students

C) 225 students

D) 43 students

8) _____

Find the reciprocal.

9) $\frac{2}{3}$

A) $\frac{3}{2}$

B) $\frac{3}{1}$

C) $\frac{1}{2}$

D) 3

9) _____

10) 2

A) 2

B) $\frac{1}{2}$

C) 1

D) $\frac{2}{1}$

10) _____

Divide and simplify.

11) $16 \div \frac{4}{7}$

A) 4

B) $\frac{1}{28}$

C) $\frac{64}{7}$

D) 28

11) _____

12) $\frac{7}{9} \div 8$

A) $\frac{7}{17}$

B) $\frac{7}{72}$

C) None of these

D) $\frac{7}{9}$

12) _____

Solve and simplify.

13) $\frac{7}{6} \cdot x = 112$

A) 22

B) 112

C) 131

D) 96

13) _____

Find the LCM of the set of numbers.

14) 7, 14, 18

A) 126

B) 18

C) 252

D) 1764

14) _____

Add and simplify.

15) $\frac{1}{6} + \frac{3}{7}$

A) $\frac{13}{21}$

B) $\frac{4}{13}$

C) $\frac{25}{42}$

D) $\frac{4}{7}$

15) _____

Subtract and simplify.

16) $\frac{8}{9} - \frac{1}{6}$

A) $\frac{13}{3}$

B) $\frac{13}{18}$

C) $\frac{7}{54}$

D) $\frac{7}{9}$

16) _____

Use < or > for \square to write a true sentence.

17) $\frac{1}{8} \square \frac{1}{6}$

A) <

B) >

17) _____

Solve and simplify.

18) $x + \frac{1}{18} = \frac{1}{2}$

A) $x = \frac{4}{9}$

B) $x = \frac{8}{9}$

C) $x = \frac{5}{9}$

D) $x = -\frac{4}{9}$

18) _____

Use < or > for \square to write a true sentence.

19) $\frac{3}{8} \square \frac{3}{9}$

A) <

B) >

19) _____

Convert to fraction notation.

20) $4\frac{7}{9}$

A) $\frac{43}{9}$

B) $\frac{43}{7}$

C) $\frac{36}{7}$

D) $\frac{36}{9}$

20) _____

Convert to a mixed numeral.

21) $\frac{16}{3}$

A) $4\frac{1}{7}$

B) $\frac{1}{3}$

C) $6\frac{1}{3}$

D) $5\frac{1}{3}$

21) _____

Simplify.

22) $\frac{1}{5} \div \frac{3}{10} \cdot \frac{3}{4}$

A) 2

B) $\frac{1}{2}$

C) $6\frac{2}{3}$

D) $\frac{9}{200}$

22) _____

23) $\left(\frac{8}{9} - \frac{7}{18}\right) \div \frac{5}{8}$

A) $\frac{1}{2}$

B) $\frac{5}{16}$

C) $\frac{4}{5}$

D) $\frac{5}{4}$

23) _____

$$24) \left(\frac{1}{3}\right)^2 \cdot \left(\frac{3}{8} - \frac{1}{4}\right)$$

A) $\frac{1}{28}$

B) $-\frac{1}{56}$

C) $\frac{1}{72}$

D) $-\frac{5}{24}$

24) _____

Find the average of the set of numbers.

$$25) \frac{3}{4} \text{ and } \frac{5}{6}$$

A) $\frac{19}{12}$

B) $\frac{19}{24}$

C) $\frac{2}{3}$

D) $\frac{4}{5}$

25) _____

$$26) 5\frac{1}{2} \text{ and } 8\frac{5}{8}$$

A) $6\frac{13}{16}$

B) $6\frac{3}{4}$

C) $14\frac{1}{8}$

D) $7\frac{1}{16}$

26) _____

Multiply.

$$27) 0.159 \times 10$$

A) 15.9

B) 0.0159

C) 1.59

D) 0.00159

27) _____

$$28) 0.001 \times 234.1$$

A) 0.02341

B) 0.0002341

C) 2.341

D) 0.2341

28) _____

Divide.

$$29) 18.75 \div 2.5$$

A) 8.5

B) 0.75

C) 7.5

D) 75

29) _____

$$30) 0.048 \overline{)0.4176}$$

A) 88

B) 8.8

C) 87

D) 8.7

30) _____

Solve.

$$31) 26.73 = 8.1 \cdot t$$

A) 33

B) 4.3

C) 0.33

D) 3.3

31) _____

$$32) \frac{20}{y} = \frac{5}{\frac{1}{4}}$$

A) 16

B) 1

C) 25

D) 5

32) _____

$$33) \frac{\frac{3}{4}}{\frac{2}{7}} = \frac{x}{\frac{2}{3}}$$

A) $3\frac{1}{2}$

B) $1\frac{3}{4}$

C) $\frac{1}{7}$

D) $\frac{1}{2}$

33) _____

Find percent notation.

- 34) $\frac{23}{19}$ Round to the nearest tenth, if necessary. 34) _____
A) 121.1% B) 12.1% C) 190% D) 63.7%

Find fraction notation and simplify.

- 35) 0.203% 35) _____
A) $\frac{203}{1000}$ B) $\frac{203}{100000}$ C) $\frac{203}{10000}$ D) $\frac{203}{100}$

Translate to an equation and solve. When necessary, round to the nearest hundredth.

- 36) What is 55% of 200? 36) _____
A) 11 B) 1.1 C) 110 D) 1100
- 37) 34% of 1500 is what? 37) _____
A) 51,000 B) 510 C) 51 D) 5100
- 38) What is 110% of 3150? 38) _____
A) 347 B) 34,650 C) 346,500 D) 3465

Solve the problem.

- 39) A camera costs \$820. If the sales tax rate is 4%, how much tax is charged? Round your answer to the nearest cent. 39) _____
A) \$32.80 B) \$24.60 C) \$328.00 D) \$41.00
- 40) In Jameel's state, the sales tax rate is 1.75% for the city and 5% for the state. Find the total amount paid for 6 DVD players at \$149 each. 40) _____
A) \$952.11 B) \$940.26 C) \$954.35 D) \$1497.45

Solve using the addition principle.

- 41) $x + 6 = 1$ 41) _____
A) 7 B) 5 C) -5 D) 6
- 42) $-17 + t = -25$ 42) _____
A) 8 B) 42 C) -42 D) -8

Solve using the multiplication principle.

- 43) $3x = 18$ 43) _____
A) $\frac{1}{6}$ B) 15 C) 6 D) 54
- 44) $-8b = 136$ 44) _____
A) 1 B) -17 C) 144 D) -144
- 45) $-91 = -7n$ 45) _____
A) -84 B) 84 C) 2 D) 13

46) $-\frac{1}{2}z = \frac{1}{3}$ 46) _____
 A) $\frac{2}{3}$ B) $-\frac{2}{3}$ C) $-\frac{3}{2}$ D) $-2\frac{1}{3}$

47) $-\frac{32}{35}y = -\frac{8}{5}$ 47) _____
 A) $\frac{28}{9}$ B) $\frac{16}{7}$ C) $\frac{7}{4}$ D) $\frac{7}{16}$

Solve.

48) $7x + 2x = 81$ 48) _____
 A) $\frac{81}{14}$ B) $\frac{81}{7}$ C) 72 D) 9

49) $3x - 1 = 35 - 9x$ 49) _____
 A) -6 B) $-\frac{17}{3}$ C) 3 D) -3

50) $-9b + 6 + 7b = -3b + 11$ 50) _____
 A) -6 B) 11 C) -11 D) 5

51) $2(5x - 8) = 44$ 51) _____
 A) 4 B) 5 C) 7 D) 6

52) $4(3t - 14) - 7 = 33$ 52) _____
 A) 9 B) 7 C) 10 D) 8

53) $6 - 2(4t - 23) = -28$ 53) _____
 A) 9 B) 11 C) 12 D) 10

54) $4(x + 1) + 6 = 3(x + 2) + 5$ 54) _____
 A) 1 B) 11 C) 5 D) 8

Translate to an algebraic expression.

55) The sum of a number and 64 55) _____
 A) $x + 64$ B) 64 C) $64 - x$ D) $64x$

56) 6 less than 9 times a number 56) _____
 A) $6x - 9$ B) $6 - 9x$ C) $9x - 6$ D) $9 - 6x$

57) The product of 20% and some number 57) _____
 A) $20x$ B) $0.2x$ C) $0.2 + x$ D) $\frac{0.2}{x}$

58) 6 more than 7 times a number 58) _____
 A) $7x + 6$ B) $13x$ C) $7(6 + x)$ D) $6x + 7$

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Provide an appropriate response.

59) What are some word phrases that mean multiplication?

59) _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

60) Which of the following phrases could be represented by the expression $3x - 5$?

60) _____

- (i) Five less than three times a number.
- (ii) Three times a number less than five.
- (iii) Three times a number minus five.
- (iv) Five minus three times a number.

A) (ii), (iv)

B) (ii), (iii)

C) (i), (iv)

D) (i), (iii)