

# Summer 2021 Math Packet

(For Students who completed 7<sup>th</sup> Core math during the 2020 – 2021 school year)

Student's Name: \_\_\_\_\_

Parent's Signature upon Completion: \_\_\_\_\_

The purpose of this packet is to review the concepts you learned in your 7<sup>th</sup> grade math course and to keep your mathematical mind fresh! Please work on the packet throughout the summer and **not all in one sitting**.

This packet is due on August 31, 2021 and may be submitted electronically or a hard copy. This summer packet will count as a project grade for the 1<sup>st</sup> quarter. Each day the packet is late, 10 points will be deducted from your score and will not be accepted after August 31. **No Extra-Credit** will be awarded if it is turned-in before the due date.

Name \_\_\_\_\_ Date: \_\_\_\_\_

Welcome to Pre-Algebra! The following math packet consists of concepts you should already be familiar with. You are expected to have the packet completed by the first day of school and ready to turn it in on August 31, 2021. The packet will be collected for a grade and you will be tested at the end of the first week of school on these concepts. NO CALCULATOR will be allowed on that test, so practice without the use of a calculator. We will be reviewing the packet the first week of school, so make a note of any questions you have.

**WORK MUST BE INCLUDED TO RECEIVE CREDIT FOR YOUR SUMMER PACKET.** Please make sure to staple loose leave paper containing your work to packet. Your problems must be numbered and work should be in order and NEAT. **DO NOT USE PEN!!!**

Insert  $<$ ,  $>$ , or  $=$  to make the statement true.

1)  $5$  \_\_\_\_\_  $-4$

2)  $-86$  \_\_\_\_\_  $-42$

3)  $|-36|$  \_\_\_\_\_  $36$

4)  $155$  \_\_\_\_\_  $-62$

Solve. —

5) On Tuesday, the temperature was  $64^\circ$  Fahrenheit. On Thursday, the temperature was  $46^\circ$  F.  
Write an inequality statement using  $<$  or  $>$  comparing the numbers 64 and 46.

6) As part of a fund raiser, Maria sold 282 candy bars. Drew \_\_\_\_\_ sold 149 candy bars  
Write an inequality statement using  $\leq$  or  $\geq$  comparing the numbers 282 and 149.

Write the sentence as a mathematical statement.

7) Negative twenty-eight is less than negative fifteen.

8) Seven is greater than or equal to one.

Use an integer to represent the value in the statement.

9) a climb of 149 feet up a sheer mountain cliff

10)  $25^\circ$  below zero

11) a deduction of \$227.05 in your checkbook

List the numbers in set B that belong to the indicated set.

12)  $B = \{20, \sqrt{6}, -15, 0, \frac{10}{25}, 2\pi, \sqrt{25}\}$   
Natural numbers

13)  $B = \{19, \sqrt{5}, -5, 0, \frac{0}{8}, 2\pi, \sqrt{16}\}$   
Whole numbers

$$14) B = \left\{ 9, \sqrt{8}, -19, 0, -\frac{0}{4}, \dots \right\} \cup \left\{ 2\pi, \sqrt{4} \right\}$$

Integers

$$15) B = \left\{ -13, \sqrt{7}, -15, 0, \frac{0}{8}, \sqrt{4}, 2\pi, -\frac{2}{0} \right\}$$

Real numbers

Find the absolute value of the number.

$$16) |17|$$

$$17) |-8|$$

Write the fraction in lowest terms.

$$18) \frac{4}{5}$$

$$19) \frac{3}{5}$$

$$20) \frac{15}{40}$$

$$21) \frac{77}{99}$$

Write the number as a product of primes.

$$22) 55$$

$$23) 27$$

$$24) 60$$

Multiply or divide as indicated. Write the answer in lowest terms.

$$25) \frac{15}{7} \bullet \frac{1}{5}$$

$$26) \frac{10}{2} \bullet \frac{2}{6}$$

$$27) \frac{6}{7} \div \frac{10}{3}$$

$$28) 1 \frac{1}{8} \bullet \frac{4}{7}$$

$$29) -6 \frac{3}{5} \div -\frac{1}{5}$$

$$30) -\frac{2}{3} \div 6$$

Add or subtract as indicated. Write the answer in lowest terms.

31)  $-\frac{6}{11} + \frac{5}{11}$

32)  $\frac{5}{9} + (-\frac{1}{9})$

33)  $\frac{7}{8} + \frac{1}{2}$

34)  $\frac{7}{8} - \frac{2}{5}$

35)  $\frac{22}{7} - 3$

36)  $14\frac{1}{6} + 10\frac{3}{7}$

37)  $\frac{7}{8} - \frac{9}{11} + \frac{1}{2}$

Solve. Simplify the answer.

38) Jeffrey has two packages. One weighs  $1\frac{2}{5}$  ounces, and the other weighs  $\frac{3}{8}$  of an ounce.

What is the total weight of the two packages?

Evaluate.

39) 10 squared

40)  $\frac{1}{5}^2$

Simplify the expression.

41)  $9 \bullet 8 - 5$

42)  $4 \bullet 10 + 11 \bullet 17$

43)  $9^2 - 2 \bullet 5$

44)  $\frac{1}{4} + \frac{1}{6} \bullet \frac{1}{7}$

45)  $\frac{13+7}{3^2-4}$

$$46) 6[3 + 8(2 + 6)]$$

$$47) (12 + |15 - 2|) \div 3^2 - 4$$

Evaluate the expression for the given replacement values.

$$48) (7x - 2y) \div 8 \quad \text{for } x = 5, y = 10$$

$$49) (x + 2y)^2 \quad \text{for } x = 3, y = 4$$

Add.  $50) 14 + (-10)$

$$51) 3/20 + (-3/20)$$

$$52) -1/3 + (-1/3)$$

$$53) -8.9 + (-2.4)$$

Subtract.

$$54) 12 - 13$$

$$55) -5 - 8$$

$$56) -12 - (-2)$$

$$57) -4/5 - (-7/10)$$

Multiply.

$$58) -14 \bullet 0$$

$$59) (-2)(-2)$$

$$60) -3.4(-15)$$

$$61) (-6)(-10)(-10)$$

Find the reciprocal or multiplicative inverse.

$$62) 4$$

$$63) 1/3$$

Divide.

64)  $\frac{-42}{-6}$

65)  $\frac{-168}{7}$

66)  $\frac{-21}{0}$

67)  $0 \div 59$

68)  $\frac{7}{8} \div (-\frac{7}{8})$

Write the decimal as a percent.

69) 7.2

70) 0.056

Write the percent as a decimal.

71) 31%

72) 0.1%

Write the fraction or mixed number as a percent.

73)  $\frac{41}{100}$

74)  $\frac{13}{16}$

**Solve. If necessary, round percents to the nearest tenth, dollar amounts to the nearest cent, and all other numbers to the nearest whole.**

75) 20% of the accountants in a business are female. If there are 330 accountants altogether, how many accountants are female?

76) A facilities manager determines that 5% of the offices, or 20 offices, in the building are not

occupied. Find the total number of offices in this building.

Simplify the expression by combining any like terms.

77)  $4y - y - 10y$

78)  $7x + 3 - 2x + 5$

79)  $-5m + 7 - 5 + 1 + m - 3$

80)  $4x + 7(x + 3) + 4$

81)  $7(3x - 1) - 4(x - 4)$

82)  $3(6x + 4) + 8(x + 3)$

6x meters

(8x - 3)

meters

Solve the equation.

5x

83)  $-6x - 10 = 44$

meter

84)  $10n - 4 = 76$

s

85)  $13 = 6x - 5$

7 meters

86)  $-3 = 2x + 9$

94) Find the area of the rectangle.

87)  $-36 - 9x = -5x$

8 feet

88)  $2(5x - 4) = 14x$

(

89)  $7(3x - 2) = 19x$

x

90)  $4(y - 6) = 6y - 24$

-

91)  $3(x - 8) = -15 - 3$

4

)

92)  $-4(x + 3) - 36 = -14 - 10$

f

Find the perimeter or area of the figure as

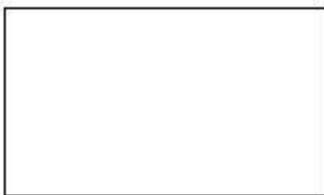
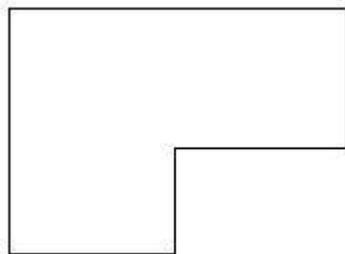
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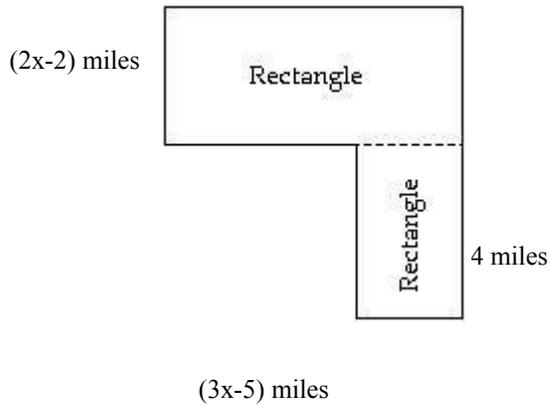
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93) Find the  
perimeter.  $(3x + 5)$   
meters

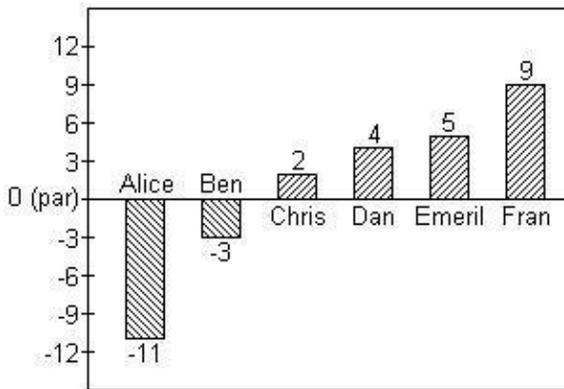


95) Find the area of the figure. 11 miles



Scores in golf can be 0 (also called par), a positive integer (also called above par) or a negative integer (also called below

par). Below are the scores of some members of a college golf team in a recent tournament.



100) Mary and her brother John collect foreign coins. Mary has three times the number of coins that John has. Together they have 180 foreign coins. Find how many coins Mary has.

96) Find the average of the scores for Dan, Emeril and Fran.

**Solve.**

97) The product of 7 and a number is equal to 84. Find the

number.

98) Seven times the difference of 9 and a number amounts to

84. Find the number.

99) The sum of 3, 4, and a number amounts to 15. Find the

number.



