



**2024-2025**

**SIXTH GRADE MATH  
SUMMER PACKET**

This packet will be due the first week of school and it will be graded.  
Please use pencil only and remember: **NO WORK, NO CREDIT!**

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

Teacher: \_\_\_\_\_

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**Whole Number Operations**

*Add, subtract, multiply, or divide.*

1)  $2846 + 1635$

2)  $24592 + 46268$

3)  $776 - 498$

4)  $1904 - 625$

5)  $776 \times 98$

6)  $376 \times 18$

7)  $493 \times 67$

8)  $588 \div 84$

9)  $1620 \div 36$

10)  $770 \div 28$

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**Order of Operations and Exponents**

11) Write in exponent form.

$$8 \times 8 \times 8 \times 8 \times 8$$

12) Find the value.

$$2^6$$

*Simplify each expression by using the order of operations.*

13)  $3^2 + 6 - 2 \times 7$

14)  $20 \div 5 \times 2 - (6 + 2) \times 7$

**Prime Factorization**

15) Identify all the prime numbers from the list.

14    4    11    9    3    17    1

## FRACTION OPERATIONS

### ADD OR SUBTRACT "+ OR -" WITH COMMON DENOMINATORS

Add the numerators, denominator stays the same.

EXAMPLES:

$$\frac{2}{7} + \frac{3}{7} = \frac{5}{7}$$

$$\frac{7}{8} - \frac{4}{8} = \frac{3}{8}$$

### ADD OR SUBTRACT "+ OR -" WITH DIFFERENT DENOMINATORS

Change to equivalent fractions with common denominators, then add or subtract

EXAMPLES:

$$\frac{2}{3} + \frac{1}{4} = \frac{8}{12} + \frac{3}{12} = \frac{11}{12}$$

$$\frac{5}{6} - \frac{1}{2} = \frac{5}{6} - \frac{3}{6} = \frac{2}{6} = \frac{1}{3}$$

### MULTIPLY "x"

Multiply the numerators, multiply the denominators, then simplify

EXAMPLE:

$$\frac{2}{3} \times \frac{5}{6} = \frac{10}{18} = \frac{5}{9}$$

### DIVIDE "÷"

Change the problem to multiplication by inverting the second fraction, then multiplying.

EXAMPLE:

$$\frac{2}{5} \div \frac{1}{2} = \frac{2}{5} \times \frac{2}{1} = \frac{4}{5}$$

### Simplifying Fractions

Write each fraction in simplest terms.

$$19) \frac{15}{25}$$

$$20) \frac{35}{42}$$

$$21) 4\frac{29}{29}$$

### Improper Fractions and Mixed Numbers

Change the mixed numbers to improper fractions and the improper fractions to mixed numbers.

$$22) 2\frac{4}{5}$$

$$23) 6\frac{11}{17}$$

$$24) \frac{8}{3}$$

$$25) \frac{132}{11}$$

### Operations with Fractions

Add, subtract, or multiply. Reduce to lowest terms.

$$26) \frac{7}{16} + \frac{3}{16}$$

$$27) \frac{7}{10} + \frac{2}{10} - \frac{8}{10}$$

$$28) \frac{1}{2} + \frac{2}{3}$$

$$29) \frac{2}{3} - \frac{1}{6}$$

$$30) \frac{5}{6} + \frac{1}{4}$$

$$31) \frac{1}{2} - \frac{1}{5}$$

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$$32) 1\frac{1}{3} + 2\frac{1}{3}$$

$$33) 2\frac{2}{3} - \frac{1}{3}$$

$$34) 10 - 4\frac{5}{6}$$

$$35) 5\frac{1}{4} + 3\frac{5}{8} + 2\frac{1}{2}$$

$$36) 2\frac{1}{2} - 1\frac{3}{4}$$

$$37) \frac{5}{9} \times \frac{3}{10}$$

$$38) \frac{3}{16} \times 8$$

$$39) 2\frac{1}{2} \times 3\frac{1}{5}$$

## DECIMAL OPERATIONS

ADDITION		SUBTRACTION
<p>Ex. <math>17.2+0.04+0.006</math></p> $  \begin{array}{r}  17.200 \\  0.040 \\  + 0.006 \\  \hline  17.246  \end{array}  $	<ul style="list-style-type: none"> <li>☒ Line up the <b>decimal points</b></li> <li>☒ Add <b>zeroes</b> as placeholders</li> <li>☒ Add or subtract the numbers in columns</li> <li>☒ Insert a <b>decimal point</b> in the answer under the other <b>decimal points</b></li> </ul>	<p>Ex. <math>8.63-0.263</math></p> $  \begin{array}{r}  8.630 \\  - 0.263 \\  \hline  8.367  \end{array}  $
MULTIPLICATION		DIVISION
<ul style="list-style-type: none"> <li>• Line up the numbers, ignore the <b>decimal points</b>, and multiply</li> <li>• Count the number of digits to the right of the <b>decimal points</b> in the problem</li> <li>• In the product, count from right to left to place the <b>decimal point</b> the total number of decimal places in the problem</li> </ul> <p style="margin-left: 40px;">2 digits to the right of the <b>decimal point</b>     6.04</p> <p style="margin-left: 40px;">1 digit to the right of the <b>decimal point</b>     x 3.1</p> <p>2+1=3 Place the <b>decimal point</b> 3 digits from the right     18.724</p>		<div style="text-align: center;"> <math display="block">  \begin{array}{r}  6.1 \overline{) 20.74} \\  \underline{12.2} \\  8.54 \\  \underline{6.1} \\  2.44 \\  \underline{1.83} \\  0.61  \end{array}  </math> </div> <div style="text-align: center; margin-top: 20px;"> <math display="block">  \begin{array}{r}  61 \overline{) 207.4} \\  \underline{122} \\  854 \\  \underline{474} \\  380 \\  \underline{306} \\  74 \\  \underline{71} \\  30  \end{array}  </math> </div> <div style="text-align: center; margin-top: 20px;"> <math display="block">  \begin{array}{r}  61 \overline{) 207.4} \\  \underline{122} \\  854 \\  \underline{474} \\  380 \\  \underline{306} \\  74 \\  \underline{71} \\  30  \end{array}  </math> </div> <ul style="list-style-type: none"> <li>• Move the decimal point in the divisor to make a whole number.</li> <li>• Move the decimal point in the dividend the same number of spaces to the right.</li> <li>• Place the decimal point in the quotient directly above the decimal point in the dividend</li> </ul>

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### Decimals to Fractions

Write each decimal as a fraction. Reduce to lowest terms.

40) 0.8

41) 0.56

### Decimal Operations

Add, subtract, or multiply.

42)  $9.242 + 0.87$

43)  $35.87 - 10.2$

44)  $40.4 - 6.77$

45)  $0.7 \times 0.4$

### Fractions to Decimals

Write each fraction as a decimal.

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

47)

46)  $0.12 \times 0.6$

*Handwritten notes:*  
Convert the fraction to a decimal  
Divide the numerator by the denominator