


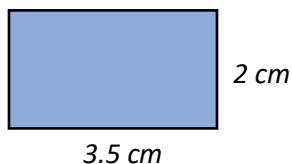
Directions: Show your work for all problems on these pages! **NO CALCULATORS PERMITTED!**

A completed hard copy (work done in pencil) of this packet is due the first day of school. Be prepared for an assessment on this material the first week of school after your teacher goes over it with you.

<p>1. Evaluate without a calculator (PEMDAS):</p> <p>a) <math>6 + 4 - 2 \cdot 3</math></p> <p>b) <math>\frac{(14-4)}{2}</math></p> <p>c) <math>8 - 2^2</math></p>	<p>2. Combine like terms:</p> <p>a) <math>6x + 5x</math></p> <p>b) <math>3x + y - 2x + 8y</math></p> <p>c) <math>25x + 7 - 13x + 2</math></p>
<p>3. Distribute:</p> <p style="text-align: center;">               example: <math>3(b + 4)</math>  <math>3b + 12</math> </p> <p>a) <math>4(a + 2)</math></p> <p>b) <math>5(2x - 3)</math></p> <p>c) <math>3(2p - 11) + 10p</math></p>	<p>4. Solve the following one step equations:</p> <p style="text-align: center;">             example: <math>x + 6 = 15</math>  <math>-6 \quad -6</math>  <math>x = 9</math> </p> <p>a) <math>x + 12 = 16</math></p> <p>b) <math>y - 4 = 9</math></p>
<p>5. Solve the following one step equations:</p> <p style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             example: <math>2x = 10</math>  <math>\div 2 \quad \div 2</math>  <math>x = 5</math> </div> <div style="text-align: center;">             example: <math>\frac{x}{3} = 4</math> (3)  <math>\cdot 3 \quad \cdot 3</math>  <math>x = 12</math> </div> </p> <p>a) <math>3x = 21</math>                      b) <math>\frac{y}{4} = 2</math></p> <p>c) <math>4y = 12</math>                      d) <math>\frac{x}{5} = 4</math></p>	<p>6. Evaluate each expression given that <math>x = 4</math>:</p> <p style="text-align: center;">example: <math>2x</math> <math>2(4) = 8</math></p> <p>a) <math>x + 6</math>                              b) <math>x^2</math></p> <p>c) <math>5x - 3</math>                            d) <math>\frac{6x}{8}</math></p>

7. Find the perimeter and the area of the given rectangle (don't forget to label your units):

- Perimeter =  $2l + 2w$
- Area =  $l \cdot w$



Perimeter:

Area:

8. Find the greatest common factor (GCF) for each set of numbers:

example: 32 and 48

factors of 32 are: 1, 2, 4, 8, 16, 32

factors of 48 are: 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

so, the GCF of 32 and 48 is 16

a) 16 and 24

b) 18 and 45

9. Find the least common multiple (LCM) of each set of numbers:

Example: 6 and 8

multiples of 6 are: 6, 12, 18, 24, 30, 36

multiples of 8 are: 8, 16, 24, 32,

so, the LCM of 6 and 8 is 24

a) 3 and 5

b) 4 and 7

10. Write each fraction in simplest form:

Example:  $\frac{12}{40} = \frac{3}{10}$

both 12 and 40 were divisible by 4

a)  $\frac{10}{16} =$

b)  $\frac{15}{27} =$

11. Convert the following to a mixed number:

Example:  $\frac{15}{8} = 1\frac{7}{8}$

8 goes into 15 1 time with 7 left over

a)  $\frac{11}{3} =$

b)  $\frac{25}{9} =$

12. Convert the following to an improper fraction:

Example:  $2\frac{3}{5} = \frac{13}{5}$

$2 \cdot 5 = 10 + 3 = 13$  over the original denominator

a)  $4\frac{1}{4} =$

b)  $1\frac{5}{6} =$

13. (Remember: You must have common denominators when adding and subtracting fractions).

Perform the indicated operation for the following and write all answers in simplest form:

a)  $\frac{4}{11} + \frac{3}{11} =$

example:  $\frac{3}{4} - \frac{1}{5} = \frac{15}{20} - \frac{4}{20} = \frac{11}{20}$

A number both 4 and 5 have in common (LCM) is 20 so,

4 goes into 20 5 times and 5 times 3 is 15  $\rightarrow \frac{3}{4} = \frac{15}{20}$

And 5 goes into 20 4 times and 4 times 1 is 4  $\rightarrow \frac{1}{5} = \frac{4}{20}$

b)  $\frac{2}{3} + \frac{4}{5} =$

c)  $\frac{7}{12} - \frac{1}{6} =$

14. Perform the indicated operation for the following and write all answers in simplest form:

Example:  $\frac{8}{9} \cdot \frac{4}{5} = \frac{32}{45}$

Example:  $\frac{1}{8} \div \frac{1}{3} = \frac{1}{8} \cdot \frac{3}{1} = \frac{3}{8}$

\*when dividing fractions, you multiply the first fraction by the reciprocal of the second fraction

a)  $\frac{2}{3} \cdot \frac{5}{6} =$

b)  $\frac{3}{8} \div \frac{2}{3} =$

c)  $\frac{1}{2} \div \frac{3}{4} =$

15. Round the following numbers to the indicated place:

**To round off decimals:**

1. Find the place value you want (the "rounding digit") and look at the digit just to the right of it.
2. If that digit is less than 5, do not change the rounding digit but drop all digits to the right of it.
3. If that digit is greater than or equal to five, add one to the rounding digit and drop all digits to the right of it.

Example: Rounding off 103.06 correct up to 1 places of decimal means rounding off to the nearest tenths.

Look at the hundredths place, which is the 6.

$6 > 5$ , so *add 1 to the zero and drop the 6*

103.06 is rounded off as 103.1

a) Round to the nearest hundredths      18.6231 =

b) Round to the nearest thousandths      25.0563 =

c) Round to the nearest whole number      100.9822 =

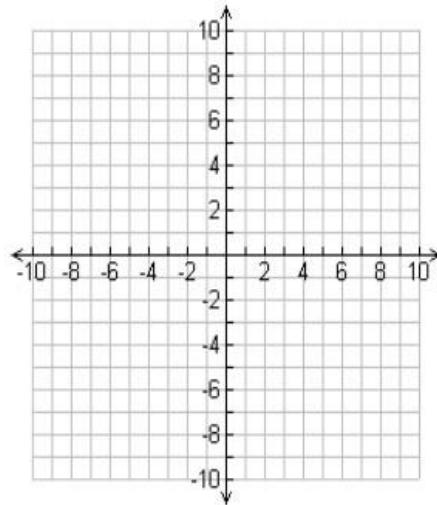
16. Write an algebraic expression for each of the following:

Example: *Twenty – five divided by a number  $q$*   $\rightarrow$  written as  $\frac{25}{q}$

- a) *A number  $t$  minus five*
- b) *Four times some number  $a$*
- c) *Three times a number  $x$  plus two*

17. Plot each coordinate on the given graph:

- A. (1, 2)
- B. (4, -3)
- C. (-1, -5)
- D. (-2, 0)
- E. (0, 8)
- F. (-3, 9)



18. Name the coordinates of the points on the following graph:

- 1) A ( , )      2) B ( , )      3) C ( , )
- 4) D ( , )      5) E ( , )      6) F ( , )
- 7) G ( , )      8) H ( , )      9) I ( , )

