

Math Packets Summer

This packet is intended for students going into

Course 2

Directions: Complete the following math packet week by week. Each week you will find the topic divided into parts so you can manage the workload. This packet has 6 weeks of materials. Take your time and avoid the summer slide by completing the following work that will prepare you for Course 2. Additionally, at the end of each section, you will find a "Minute math" activity. These problems are designated to improve your math fluency and practice using strategies for solving a variety of problems.

Week 1:

Work on your Decimal Operations. Take your time and follow the examples.

Adding & Subtracting Decimals

- 1. Write the problem vertically, lining up the decimal points.
- 2. Add additional zeroes at the end, if necessary, to make the numbers have the same number of decimal places.
- 3. Add/subtract as if the numbers are whole numbers
- 4. Bring the decimal point straight down

ex: 14.2 - 7.934

14.2<mark>00</mark> - 7.934

Multiplying Decimals

- I. Write the problem vertically with the numbers lined up to the right. The decimal points do NOT need to be lined up.
- Ignore the decimals and multiply as if the numbers are whole numbers.
- 3. Count the total number of decimal places in the factors and put a decimal point in the product so that it has that same number of decimal places.

ex: 6.94 x 7.8

Dividing Decimals

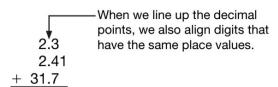
- Write the dividend under the long division symbol and the divisor to the left of it.
- 2. Move the decimal point in the divisor after the number to turn it into a whole number and then move the decimal in the dividend the same number of places. Then bring it up.
- 3. Divide as if the numbers are both whole numbers.
- 4. Annex zeros in the dividend as needed until there is no remainder. If your answer is a repeating decimal, write the answer using bar notation.

ex: 25.3 ÷ 0.3

Part 1:

Adding and Subtracting Decimal Numbers

We set up decimal numbers for addition or subtraction by lining up the decimal points. Empty places are treated as zeros.



Remember to subtract in order.

Practice:

Simplify 1-6.

Part 2:

• Multiplying Decimal Numbers

To multiply decimal numbers:

- 1. Multiply.
- 2. Count the digits to the **RIGHT** of the decimal points in all the factors.
- 3. Place the decimal point in the product that many places from the right-hand side.

Example:
$$0.15 \times 0.9$$
 3 places 0.135

Practice:

Simplify 1-4.

1.
$$0.5 \times 0.14 =$$

3.
$$0.24 \times 0.13 =$$

5. What is the product of 2.3 and 0.024?

Part 3: Mixed Practice

Evaluate each expression.

Evaluate each expression.		
1. 5.983 + 2.99	2. 224 - 56.73	3. 6.12 - 4.923
4. 24.5 · 3.2	5. 0.23 · 7	6. 3.86 · 9.15
7. 14.8 ÷ 5	8. 46.3 ÷ 1.5	9. 147 ÷ 2.25
10. 24.33 - 2.5 · 7	II. 3.9 + 4.5 ²	12. 9.25(18.4 - 2 · 1.2)

Solve each word problem, showing all work.

13.	Jeff had \$46.18 in his wallet Monday morning. He gave half of his money to his brother. He then bought two donuts for \$0.75 each and a cup of coffee for \$2.99. How much money did Jeff have left?	14.	Five friends split a \$65.20 bill at a restaurant. They also each left \$2.75 for the tip. How much money did each person pay in all?

Minute Math Week 1:



MINUTE 1



ABCD

- 1. Circle the number that has a 4 in the tens place. 324 24 4,321 49
- 2. Circle the set of lines that are parallel.
- 3. Write these decimals in order from least to greatest. 0.403 0.034 0.340
- 4. Write the fraction that represents the shaded boxes.

- **6.** Complete the pattern: 1, 5, 9, 13, ____.
- **7.** What is the area (number of squares) in the rectangle to the right?
- According to the chart, how many desks are in column A?

 According to the chart, how many desks are in column A?

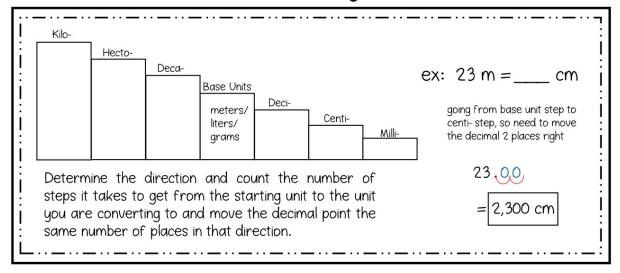
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10.
$$7)\overline{28} = 7)\overline{42} = 7)\overline{63} =$$

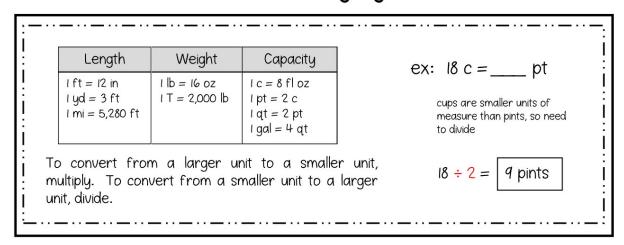
Week 2:

Work on Conversions. Take your time and follow the examples if needed.

The Metric System



The Customary System



Part 1: Conversions

Convert each Metric measurement. Show your work.

3			
85. I.9 km = m	86. 23 g = mg	87. 350 ml = kl	
		40 25	
88. 0.07 kg = cg	89. 6 cm = m	90. 35 ml = l	

Convert each Customary measurement. Show your work.

	Server Construction of Medical Construction Grant Gran				
91.	48 in = ft	92.	6 pt = c	93.	3 T = lb
all	1.5 mi = ft	a5	32 pt = gal	a(_a	32 oz =lb
177.	1.5 1111 – 11	15.	32 pt = gui	70.	JE 02 –ID

Part 2: More Conversions

Note: 1 yard (yd) = 3 feet (ft); 1 foot = 12 inches (in)

Example: 14 in = 1 ft 2 in

Convert the given measures to new units.

3.
$$55 \text{ yd} = \underline{\text{ft}} = 4. 92 \text{ in} = \underline{\text{yd}}$$

7.
$$5 \text{ in} = \underline{\text{ft}} = 8. 73 \text{ yd} = \underline{\text{ft}}$$

19.
$$6 \text{ in} = \underline{\qquad \qquad \qquad \text{ft} } 20. 69 \text{ yd} = \underline{\qquad \qquad \text{in}}$$

Minute Math Week 2:



MINUTE 2



- If you flip a coin 10 times, how many times will it land on heads?
 - **a**. 10
- **b.** 5
- c. 2
- d. impossible to tell

- **2.** Which shape is a pentagon?
 - a.
- b. ()
- c. _____
- d. (

3. Write the fraction for each:

Two-fifths = _____
Three-fourths = ____



- **5.** 3 × 4 + 4 =
- **6.** Complete the pattern: 4, 8, 12, 16, _____.

?. What is the perimeter (distance around) of the rectangle to the right? _____.

Write the fraction that represents the shaded boxes.

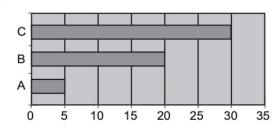


8. According to the graph to the right:

A = _____

B = _____

C = ____



9. 8 · 6 =

8 • 4 =

8 • 7 =

10. $\frac{24}{6}$

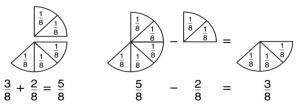
 $\frac{36}{6}$

 $\frac{18}{6}$

1:

Adding and Subtracting Fractions That Have Common Denominators

Use fraction manipulatives to help you see that the denominator does not change.



Notice that the denominators are the same. So, add or subtract the numerators. The denominator does **not** change.

Practice:

Simplify 1-6.

1.
$$\frac{3}{5} + \frac{1}{5} =$$

2.
$$\frac{2}{3} + \frac{1}{3} =$$

3.
$$\frac{1}{6} + \frac{2}{6} + \frac{2}{6} =$$

4.
$$\frac{7}{8} - \frac{2}{8} =$$

5.
$$\frac{6}{7} - \frac{6}{7} =$$

6.
$$\frac{4}{9} + \frac{5}{9} - \frac{2}{9}$$

Part 2: Keep going.....

All these fractions have the same denominator.

• Just add the two numerators up, keeping the denominator the same!

• The first one is done for you.

1)
$$\frac{2}{5} + \frac{2}{5} = \frac{4}{5}$$

2)
$$\frac{1}{4} + \frac{2}{4} = \frac{1}{4}$$

3)
$$\frac{1}{5} + \frac{2}{5} = \frac{1}{5}$$

4)
$$\frac{2}{6} + \frac{1}{6} = \frac{}{6}$$

5)
$$\frac{1}{8} + \frac{1}{8} = \frac{1}{8}$$

6)
$$\frac{2}{5} + \frac{2}{5} = \frac{}{5}$$

7)
$$\frac{1}{9} + \frac{2}{9} = \frac{}{9}$$

8)
$$\frac{3}{10} + \frac{1}{10} = \frac{1}{10}$$

9)
$$\frac{1}{3} + \frac{1}{3} = \frac{1}{3}$$

10)
$$\frac{2}{7} + \frac{2}{7} = \frac{7}{7}$$

11)
$$\frac{3}{8} + \frac{2}{8} = \frac{}{8}$$

12)
$$\frac{5}{9} + \frac{1}{9} = \frac{}{9}$$

13)
$$\frac{1}{6} + \frac{3}{6} = \frac{}{6}$$

14)
$$\frac{2}{8} + \frac{5}{8} = \frac{8}{8}$$

15)
$$\frac{1}{10} + \frac{4}{10} = \frac{1}{10}$$

16)
$$\frac{4}{9} + \frac{3}{9} = \frac{}{9}$$

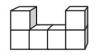
Minute Math Week 3:







- If it is 5:32 now, what time will it be 24 minutes from now?
- How many cubes are in this shape?



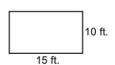
3. Write two fractions that represent the shaded boxes.



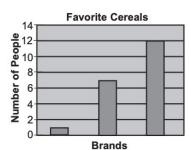
4. Write > or < in the circle to compare the fractions.

$$\frac{7}{9}$$
 $\frac{8}{9}$

- 5. Mel makes arm bracelets. She is making one for each arm of her six friends. How many should she make? _____
- 6. Complete the pattern. 2, 4, 8, ____.
- 7. Joe wants to build a fence for his dog Charlie. He plans to surround the rectangle to the right with fence. How many feet will he need? _____



8. How many people took part in this survey?



9.
$$(12)(3) = (12)(5) =$$

$$(12)(6) =$$

10.
$$50 \div 5 =$$

$$55 \div 5 = 45 \div 5 =$$

Week 4:

One Step Equations: "Unknowns"

Part 1: Unknowns

- Unknown Numbers in Addition
- Unknown Numbers in Subtraction

The quantity on either side of an equals sign is the same.

$$4 + 5 = 9$$

A letter can take the place of an unknown number.

$$4 + x = 9$$

Addition: addend + addend = sum

To find a missing addend, subtract the known addend from the sum.

Examples:

$$2 + a = 5 \longrightarrow 5 - 2 = a \longrightarrow a = 3$$

 $b + 3 = 5 \longrightarrow 5 - 3 = b \longrightarrow b = 2$

Subtraction: minuend - subtrahend = difference

To find a missing minuend, add the difference and subtrahend.

To find a missing subtrahend, subtract the difference from the minuend.

Examples:

$$n-3=2$$
 \longrightarrow $2+3=n$ \longrightarrow $n=5$
 $5-y=2$ \longrightarrow $y=3$

Practice:

Find each unknown number.

$$1. a + 12 = 30$$

2.
$$m + 32 = 59$$

5. 47 + p = 82

$$m = \underline{\hspace{1cm}}$$

4.
$$8 + b = 20$$

7.
$$c - 15 = 12$$

8.
$$s - 26 = 15$$

p = _____

10.
$$49 - d = 36$$

11. 92
$$- f = 67$$

$$f = \underline{\hspace{1cm}}$$

1.
$$a + 12 = 30$$
 2. $m + 32 = 59$ **3.** $w + 47 = 81$

$$w = _{----}$$

6. 89 +
$$k = 125$$

$$k = \underline{\hspace{1cm}}$$

9.
$$t - 38 = 52$$

12.
$$2000 - d = 1215$$

- Unknown Numbers in Multiplication
- Unknown Numbers in Division

5w means "5 times w." $\frac{12}{x}$ means "12 divided by x."

Multiplication

 $factor \times factor = product$

To find an unknown factor, divide the product and the known factor.

Example:

$$5w = 20 \longrightarrow 20 \div 5 = w \longrightarrow w = 4$$

Division

quotient

 $\frac{\text{dividend}}{\text{divisor}}$ = quotient $\frac{\text{divisor}}{\text{divisor}}$ = quotient divisor)dividend

To find a missing dividend, multiply the divisor and the quotient.

To find a missing divisor, divide the dividend by the quotient.

Examples:

$$\frac{n}{3} = 6 \longrightarrow 6 \times 3 = n \longrightarrow n = 18$$

$$y)35 \longrightarrow 35 \div 5 = y \longrightarrow y = 7$$

Practice:

Find each unknown number.

x = ____

1
$$4x = 32$$

2.
$$6x = 78$$

1.
$$4x = 32$$
 2. $6x = 78$ **3.** $8m = 256$

$$m = _{-----}$$

4.
$$\frac{W}{3} = 8$$

5.
$$\frac{n}{8} = 12$$

4.
$$\frac{w}{3} = 8$$
 5. $\frac{n}{8} = 12$ **6.** $\frac{k}{5} = 75$

$$k = \underline{\hspace{1cm}}$$

7.
$$\frac{28}{t} = 4$$

7.
$$\frac{28}{t} = 4$$
 8. $\frac{144}{x} = 9$ **9.** $p)414$

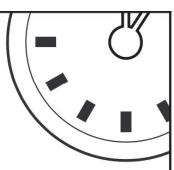
9.
$$p)414$$

Minute Math Week 4:





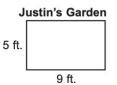




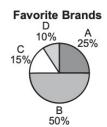
- **1.** Circle the number with a 5 in the tenths place.
- 36.05 41.5 50.313 15.38
- **2.** Which of these shapes is a trapezoid?
 - а.
- b. (
- c. _____
- d. ()

For Problems 3-4, write >, <, or =. Use the bars to help you.

- **3.** $\frac{3}{6}$ $\frac{1}{3}$
- **4.** $\frac{1}{4}$ $\frac{1}{3}$
- **5.** 2(4 + 7) =
- **6.** Complete the pattern. 123, 234, 345, _____.
- Justin has 30 feet of fence. Would this be enough to surround his garden? Circle: Yes or No



8. According to the chart, Brand B was chosen twice as often as Brand _____.



$$\begin{array}{ll}
\mathbf{9.} & 1+2+3=\\ 3+4+5=\\ 5+6+7=
\end{array}$$

10. 38 43 26 + 37 + 96 + 57

Week 5:

Finding a fraction of a whole number

Part 1:

• "Equal Groups" Word Problems with Fractions

What number is $\frac{3}{4}$ of 12?

Example:

1.	Divide the total by the
	denominator (bottom number).

/	10.000		
r (bottom number).	0	0	0
÷ 4 = 3	0	0	0
÷ 4 = 3	0	0	0
	1		

$$\frac{1}{4}$$
 of 12 is 3.

2. Multiply your answer by the numerator (top number).

12

0		0
0	0	0
0	0	0

$$3 \times 3 = 9$$

So,
$$\frac{3}{4}$$
 of 12 is 9.

Practice:

1. If $\frac{1}{3}$ of the 18 eggs were cracked, how many were not cracked?

2. What number is $\frac{2}{3}$ of 15?

3. What number is $\frac{3}{8}$ of 72?

4. How much is $\frac{5}{6}$ of two dozen?

5. Two fifths of the 40 answers were correct. How many answers were correct?

6. If $\frac{3}{4}$ of the 1000 show tickets were sold, how many tickets were sold?

Part 2:

Fractional Parts

Numerator shows how many of the parts are counted shows the total number of parts

Name **how many** parts are **shaded** out of a **total** number of parts.



2 out of 3 are shaded $\left(\frac{2}{3}\right)$



 $\frac{2}{3}$ (two thirds) is shaded $\frac{1}{3}$ (one third) is **not** shaded

 $\frac{1}{2}$ of a number \longrightarrow divide by 2

 $\frac{1}{3}$ of a number \longrightarrow divide by 3

 $\frac{1}{4}$ of a number \longrightarrow divide by 4

Practice:

- **1.** What is the denominator of $\frac{13}{15}$?
- 2. What fraction of this circle is shaded?



- **3.** What number is $\frac{1}{4}$ of 40? _____
- **4.** What number is $\frac{1}{3}$ of 15?
- **5.** What number is $\frac{1}{2}$ of \$5.50?
- 6. A team won 3 of its 10 games.

What fraction of games did the team win?

Minute Math Week 5:

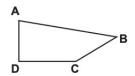




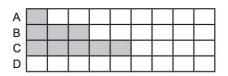


- 7. The height of a room would most likely be 10 _____.

 a. feet b. inches c. yards
- **2.** Which letter on the shape is beside a right angle? _____



- 3. $\frac{1}{2}$ of 20 =
- **4.** Write as a decimal: two and three-tenths =
- **5.** If the pattern continues, how many boxes should be shaded in row D?



- **6.** $(2 \times 3) + (3 \times 4) =$
- **?.** What is the area of the shape to the right?



8. In the chart to the right, the *y* numbers are _____ times the *x* numbers.

x	1	2	4
у	3	6	12

- **9.** 49 51 -32
- **10.** 14 23 × 5 × 7

Week 6:

Multiplying and Reducing Fractions

Part 1:

- Multiplying Fractions
- Reducing Fractions by Dividing by Common Factors

Multiplying fractions

· "Of" means "multiply."

Multiply numerator \times numerator and multiply denominator \times denominator.

- Set up whole numbers as fractions. $\left(4 = \frac{4}{1}\right)$
 - **Example:** $\frac{2}{3}$ of $\frac{4}{5}$ means $\frac{2}{3} \xrightarrow{\times} \frac{4}{5} = \frac{8}{15}$
 - Example: $4 \times \frac{2}{3}$

$$\frac{4}{1} \times \frac{2}{3} = \frac{8}{3} = 2\frac{2}{3}$$

Reducing fractions

Find a number that will evenly divide both the numerator and the denominator.

Example: $\frac{4}{6} \implies 2 = \frac{2}{3}$

Practice:

Simplify 1-2.

1.
$$\frac{1}{2}$$
 of $\frac{3}{5} =$

2.
$$2 \times \frac{2}{3} =$$

- 3. Convert $\frac{8}{6}$ to a mixed number and reduce the fraction.
- **4.** What is the product of $\frac{1}{2}$ and $\frac{2}{3}$?
- 5. Amanda correctly answered 18 of the 20 questions.

What fraction of the questions did she answer correctly?

6. What is the ratio of chickens to ducks

with 24 chickens and 18 ducks?

Part 2:

Subtracting Fractions and Mixed Numbers from Whole Numbers

- Rename 1 from the whole number as a fraction with the same denominator number to change the whole number to a mixed number.
- Subtract the fractions. Then subtract the whole numbers.

Example:
$$4 - \frac{1}{2} \longrightarrow \text{Rename 4 as } 3\frac{2}{2} \longrightarrow \frac{-\frac{1}{2}}{3\frac{1}{2}}$$

Practice:

Simplify 1–6.

1.
$$2 - \frac{1}{4} =$$

2.
$$4 - \frac{3}{8} =$$

3. 5
$$-\frac{3}{10}$$
 = _____

4.
$$3 - 1\frac{2}{3} =$$

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

6.
$$10 - 5\frac{5}{6} =$$

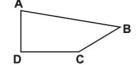
Minute Math Week 6:







- To build a school, it might take two _____. a. days b. weeks
- Which letter on the shape is beside an obtuse angle?

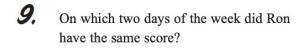


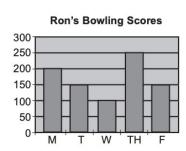
- Which of the following is (are) equal to $\frac{1}{2}$?

 - **a.** $\frac{5}{10}$ **b.** $\frac{7}{14}$ **c.** $\frac{10}{25}$
- d. $\frac{12}{30}$
- Write as a decimal: twenty-three hundredths = ...
- 5. The library, post office, and gas station are all on Elm Street. The library is three miles west of the post office. The gas station is six miles east of the post office. How far apart are the library and gas station?
- 6. Complete the pattern. A12, B16, C20, , .
- What is the area of a rectangle with a length of 9 feet and a width of 7 feet?

For Problems 8-9, use the bar graph to the right.

8. On what day of the week did Ron bowl the best? _____





10.
$$11 + 43 = 26 + 19 = 18 + 17 = 10$$

Enjoy the rest of your summer!