

Name \_\_\_\_\_

# Presbyterian Christian School



## 6<sup>th</sup> Grade Advanced Math Mr. Johnson

Over the summer, we hope each student will retain the skills, knowledge, and content mastered during 5<sup>th</sup> Grade Advanced Math. This math packet is not mandatory but is meant to review, reinforce, and enrich the topics introduced this year. Our desire is for every student to be prepared and ready to succeed in 6<sup>th</sup> Grade Advanced Math!

*Students who complete this packet and turn it in by  
Friday, August 11<sup>th</sup>,  
will receive 10 bonus points on their first test.*

Name \_\_\_\_\_

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

## Summer Packet: Students entering Pre-Algebra 6

\* This packet should be completed without a calculator.

\* All work must be shown on a separate piece of paper.

### Whole Numbers

1. Evaluate the following expressions.

$$2 + 4 \times 3 \div 6 - 17 + 10$$

$$11 + 3 - 4 \times (80 \div 10) - 4$$

2. Find each product or quotient.

a.  $485 \times 24$

b.  $1,345 \times 256$

c.  $1755 \div 65$

d. If 65 people want to share a box containing eight 50-pound sacks of rice equally by weight, how many pounds of rice should each person get?

### Fractions and Decimals

3. Find each sum or difference.

a.  $4.3 + 1.26$

b.  $102.43 + 74.1$

c.  $56.98 - 25.69$

d.  $3.4 - 0.78$

4. Find each product or quotient.

a.  $0.19$

b.  $5.342$

c.  $4.5 \div 3$

d.  $64.4 \div 40$

$\times 0.05$

$\times 13$

5. For each group of fractions, rewrite the fractions in order from least to greatest.

a.  $\frac{2}{3}, \frac{1}{2}, \frac{3}{4}, \frac{2}{6}$

b.  $\frac{24}{4}, \frac{1}{4}, \frac{11}{16}, \frac{1}{7}$

6.

a. Round 3.45499

... to the nearest whole number

... to the nearest tenth

... to the nearest hundredth

b. Round 98.9542

... to the nearest whole number

... to the nearest tenth

... to the nearest hundredth

Name \_\_\_\_\_

# Customary Measurement

R 10-1

## Units of Length

foot (ft)    1 ft = 12 in.

yard (yd)    1 yd = 3 ft

1 yd = 36 in.

mile (mi)    1 mi = 5,280 ft

1 mi = 1,760 yd

## Units of Capacity

cup (c)    1 c = 8 fluid ounces (oz)

pint (pt)    1 pt = 2 c

quart (qt)    1 qt = 2 pt

gallon (gal)    1 gal = 4 qt

### How to change from one unit of measurement to another:

To change from larger units to smaller units in the customary system, you have to multiply.

120 yd = \_\_\_\_\_ ft

1 yd = 3 ft

$120 \times 3 \text{ ft} = 360 \text{ ft}$

120 yd = 360 ft

To change from smaller units to larger ones, you have to divide.

256 oz = \_\_\_\_\_ c

1 c = 8 oz

$256 \div 8 = 32$

256 oz = 32 c

Complete.

1. 36 in. = \_\_\_\_\_ ft

2. 4 qt = \_\_\_\_\_ c

3. 5 lb = \_\_\_\_\_ oz

4. 39 ft = \_\_\_\_\_ yd

5. 1.5 mi = \_\_\_\_\_ ft

6. 3.5 gal = \_\_\_\_\_ qt

7. 2 T = \_\_\_\_\_ lb

8. 16 pt = \_\_\_\_\_ qt

9. 64 oz = \_\_\_\_\_ lb

10. 3 yd = \_\_\_\_\_ in.

11. 4 gal = \_\_\_\_\_ pt

12. 55 yd = \_\_\_\_\_ ft

13. 6.5 lb = \_\_\_\_\_ oz

14. 20 pt = \_\_\_\_\_ gal

15. 4.5 qt = \_\_\_\_\_ c

16. 205 yd = \_\_\_\_\_ ft

17. **Reasoning** A vendor at a festival sells soup for \$1.25 per cup or \$3.75 per quart. Which is the better buy?

\_\_\_\_\_

Name \_\_\_\_\_

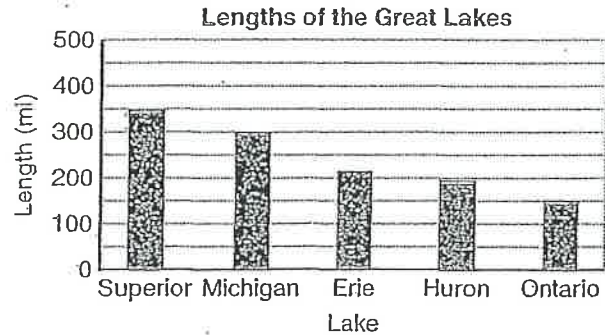
**Review**  
**8**

## Interpreting Data

The **bar graph** shows the lengths in miles of the Great Lakes. Lengths of bars represent lengths of lakes.

Which is the shortest Great Lake?

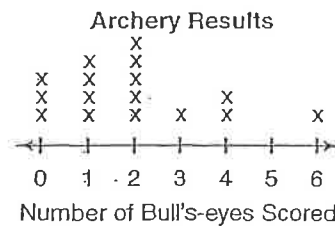
The shortest lake is Lake Ontario.



Use the graphs to answer each question.

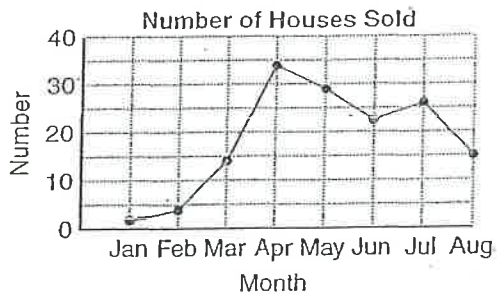
1. How many archers scored 4 bull's eyes?

\_\_\_\_\_



2. What was the most common number of bull's-eyes scored?

\_\_\_\_\_



3. In which month were the most houses sold?

\_\_\_\_\_

4. In which month were about the same number sold as were sold in August?

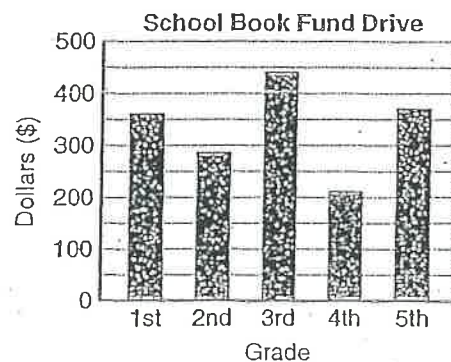
\_\_\_\_\_

5. Which grades raised about the same amount for the school book drive?

\_\_\_\_\_

6. The school's goal was to raise \$1,500. About how much did they raise in all?

\_\_\_\_\_



Round 15.435 to the nearest tenth.	Round 567.065 to the nearest hundredth.	Round 874.32 to the nearest ten.
Round 4.623 to the nearest whole number.	Round 0.7845 to the nearest hundredth.	Round 71.963 to the nearest tenth.
Round 6.8245 to the nearest tenth.	Round 182.675 to the nearest hundred.	Round 42.96 to the nearest ten.
Round 18.096 to the nearest whole number.	Round 14.6734 to the nearest hundredth.	Round 28.946 to the nearest tenth.
Round 104.642 to the nearest tenth.	Round 13.811 to the nearest whole number.	Round 23.462 to the nearest hundredth.



$452 \cdot 82$	$5,212 \cdot 40$	$326 \cdot 30$
$182 \cdot 63$	$948 \cdot 45$	$415 \cdot 12$
$1,255 \cdot 81$	$4,124 \cdot 22$	$1,800 \cdot 45$
<p>A box contains 32 candy bars. How many candy bars would be in a shipment of 563 boxes?</p>		<p>A stadium has 1,200 rows of seats. Each row has 82 seats. How many people can fit in the stadium?</p>
<p>164 books were sold in a book store today. If the same number were sold each day, how many books would be sold after 24 days?</p>		

$60 - (2 \cdot 4) - 9$	$2[3 + 2(5 - 1)]$	$10 + (6 \div 2) - 4$	$6 + 2[5 + (2 \cdot 3)]$
$6(2 + 3) - 3(8 - 2)$	$15 + 3[2(5 + 4) - 2]$	$2(5) - 10$	$18 - 2[14 - 3(2)]$
$2 + 14 \cdot 2 \div 4$	$81 \div 27 \cdot (8 - 5)$	$\frac{15 + 30}{6 - 1}$	$24 - 2(9)$
$4 + 2(3 \cdot 4)$	$40 \div 4 \cdot (3 - 2)$	$(16 - 4) \cdot 4 + 3$	$120 - 5[2(3 \cdot 2) - 2]$

<p>You pay \$1.25 per pound for 3 pounds of apples.</p>	<p>Emma weighs 38 pounds. Gavin weighs 10 pounds less.</p>	<p>Four friends split a \$20 dinner bill.</p>
<p>There are 15 kids on a bus. 6 more get on.</p>	<p>You have \$13 on a gift card and spend \$9.50.</p>	<p>It takes 100 days to build a house. 3 weeks have passed.</p>
<p>You buy 5 DVDs for \$15 each.</p>	<p>Bill used a \$10 bill to pay for a \$4.65 cup of coffee.</p>	<p>Nina left a \$12 tip on a \$42.60 lunch bill.</p>
<p>There were 325 students in 6<sup>th</sup> grade last year. There are 40 less this year.</p>	<p>A soccer team raised \$4,250 for charity last year. This year they raised \$575 more.</p>	<p>Tim pays a moving company \$50 per hour. They help him move for 9 hours.</p>



<p>What is the value of the underlined digit?</p> <p>1,425.<u>8</u>6</p>	<p>What is the value of the underlined digit?</p> <p>3<u>2</u>,962.8</p>
<p>What is the value of the underlined digit?</p> <p>3,4<u>8</u>6.77</p>	<p>What is the value of the underlined digit?</p> <p>899.3<u>5</u>4</p>

<p>Put the following numbers in order from least to greatest.</p> <p>0.3, 0.13, 0.32, 0.303</p>	<p>Put the following numbers in order from greatest to least.</p> <p>6.05, 6.007, 6.5, 6.25</p>
<p>Put the following numbers in order from greatest to least.</p> <p>8.2, 0.82, <math>\frac{4}{5}</math>, 0.08</p>	<p>Put the following numbers in order from least to greatest.</p> <p><math>-3\frac{1}{2}</math>, <math>2\frac{1}{2}</math>, <math>2\frac{10}{11}</math>, <math>-2\frac{1}{2}</math></p>
<p>Put the following numbers in order from least to greatest.</p> <p><math>-5.2</math>, 5.04, <math>-5.42</math>, <math>-5</math>, 5.14</p>	<p>Put the following numbers in order from least to greatest.</p> <p><math>-2</math>, 2.2, <math>-2.2</math>, <math>-2.02</math>, 2</p>

7. Insert  $<$ ,  $>$ , or  $=$  in each box to make a true statement.

$$0.62 \square 0.618 \quad 9.8 \square 9.80 \quad 1.006 \square 1.02 \quad 41.3 \square 41.03$$

8. Find each sum or difference.

a.  $\frac{1}{3} + \frac{2}{5}$

b.  $\frac{7}{6} + \frac{2}{3}$

c.  $7\frac{1}{3} + 5\frac{11}{12}$

d.  $\frac{1}{5} - \frac{1}{6}$

e.  $\frac{7}{8} - \frac{2}{3}$

f.  $4\frac{1}{8} - 2\frac{5}{16}$

g. Collin initially filled a measuring cup with  $2\frac{3}{4}$  cups of syrup from a large jug. Then he poured  $1\frac{1}{8}$  cups back into the jug. How much syrup remains in the measuring cup?

h. An athlete drank  $1\frac{2}{3}$  bottles of sports drink in the first half of a match and another  $3\frac{3}{5}$  bottles in the second half. How much did he drink in all?

9. Find each product.

a.  $\frac{3}{5} \times \frac{2}{9}$

b.  $\frac{9}{10} \times \frac{2}{9}$

c.  $2\frac{1}{2} \times \frac{3}{4}$

d. Jessica buys  $\frac{3}{4}$  of a pan of brownies that is  $\frac{2}{3}$  full. What fraction of the whole pan did Jessica buy? If the entire pan costs \$12, how much did Jessica pay for the portion she bought?

e. Is  $\frac{4}{5} \times \frac{5}{6}$  greater than or less than  $\frac{5}{6}$ ? Explain how you know without solving.

10. Find each quotient.

a.  $4 \div \frac{1}{2}$

b.  $\frac{1}{3} \div 6$

c. A food store donates different sized boxes of popcorn for use as prizes at a team competition. What fraction of a pound of popcorn would each student get if four students share a half-pound box of popcorn equally?

d. Ricardo has nine bars of cheese. How many pizzas can he make if each pizza requires one quarter of a bar of cheese?

# Integers

\*use your rule sheet for solving integers

1.)  $12 - (-3)$

2.)  $\frac{-14}{2}$

3.)  $-50 - 50$

4.)  $23 + (-45)$

5.)  $\frac{-40}{-4}$

6.)  $-12(-10)$

7.)  $-16 + 20$

8.)  $8(-30)$

9.)  $-120 + 40 - 20$

10.)  $\frac{-2(-18)}{6}$

Solve for the missing number (variable):

\*Remember, inverse property is your friend!!

1.)  $\frac{12}{n} = 4$

2.)  $\frac{t}{25} = 2$

3.)  $12.5 - x = 7$

4.)  $y + 23 = 45$

5.)  $3x = 99.9$

6.)  $3c - 12 = 24$

## Extensions

If you'd like an extra challenge, consider completing the questions in this section that are meant to be an extension of the math skills learned in 5<sup>th</sup> grade. Please know that you likely did not learn these skills in 5<sup>th</sup> grade. We will explore these ideas in detail in 6<sup>th</sup> grade.

1. Graph the ordered pairs below. Label each letter next to the ordered pair.

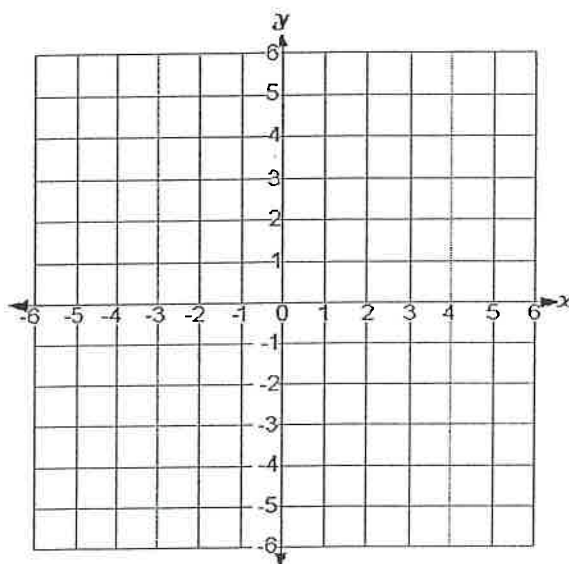
A  $(-2, 3)$

B  $(4, -5)$

C  $(0, -7)$

D  $(-2, 0)$

E  $(-5, 9)$



2. Find the greatest common factor of 30 and 42.

3. Find the least common multiple of 9 and 15.

4. "Sam" and "Martha" are the local names for two lighthouses that guard a particularly dangerous part of the coast. Sam blinks every 12 seconds, and Martha blinks every 8 seconds. They blink together at midnight. How many seconds will pass until they blink together again?

5. Miriam's uncle donated 120 cans of juice and 90 packs of cheese crackers for the school field trip. Each student is to receive the same number of cans of juice and the same number of packs of crackers. What is the greatest number of students that can go on the field trip and share the food equally with no food left over? How many cans of juice and how many packs of crackers will each of those students receive?