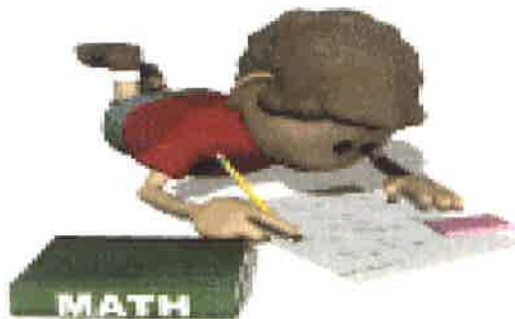


# Summer Math Packet

*Grade 5 students entering Grade 6  
in September 2014*

This assignment is to be handed in no later than Friday, September 5, 2014. ***Late work will not be accepted.*** This assignment will be graded and included in the first marking period grades.

*Students re-registering, regardless of the date of registration, will be responsible for turning in this assignment on time.*



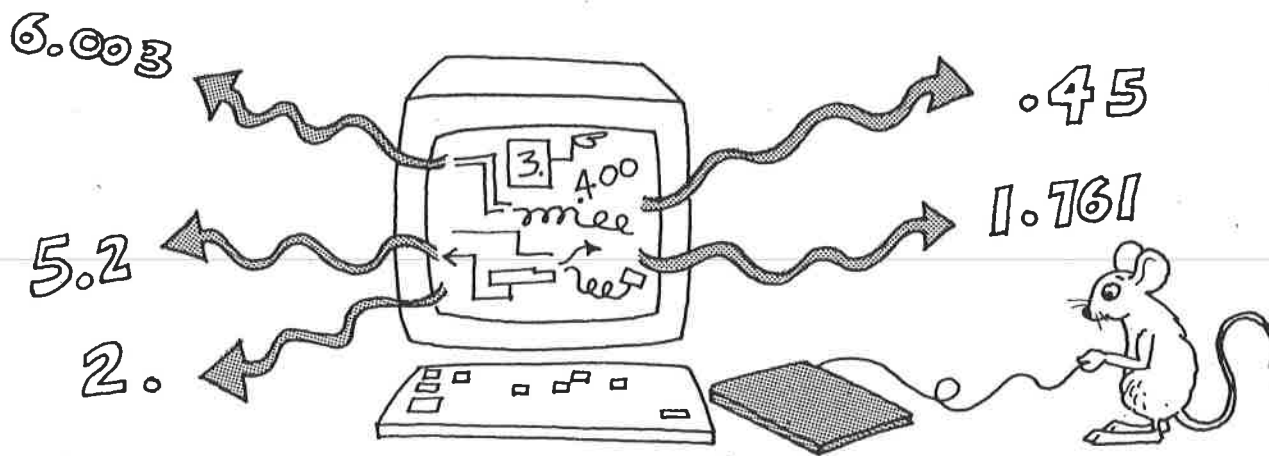
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## Math Objectives for Students Entering Sixth Grade

Upon entering the sixth grade, students should demonstrate proficiency with the following objectives:

- Adding, subtracting, multiplying and dividing whole numbers, decimals, and fractions
- Estimating sums, differences, products, and quotients of whole numbers, decimals, and fractions by rounding to the nearest whole number and decimal place
- Multiplying and dividing decimals by powers of 10 (10, 100, 1000, etc.) mentally
- Adding and subtracting mixed numbers with renaming and regrouping
- Solving single and multi-step word problems
- Converting between units of standard length, capacity, and weight
- Converting between metric units of length, capacity, and weight
- Calculating volume of a rectangular prism
- Interpreting a variety of graphs including bar graphs, line graphs, circle graphs, and line plots

These are all skills that were taught in fifth grade. If your child is having difficulty with any of these concepts, please work on them over the summer. They will be expected to be able to solve these types of problems accurately. Students who are having difficulty with basic math facts, such as multiplication tables, will be at a disadvantage in middle school.



Draw a line to match each decimal.

- |                            |       |                               |       |
|----------------------------|-------|-------------------------------|-------|
| 1. sixty-six hundredths    | 0.005 | 9. six and six tenths         | 0.45  |
| 2. five thousandths        | 5.2   | 10. one hundred and one tenth | 0.16  |
| 3. nine hundredths         | 0.045 | 11. fifteen and five tenths   | 6.6   |
| 4. five and two tenths     | 0.05  | 12. sixteen hundredths        | 15.5  |
| 5. six and six thousandths | 0.66  | 13. forty-five hundredths     | 0.005 |
| 6. five hundredths         | 0.09  | 14. five thousandths          | 100.1 |
| 7. forty-five thousandths  | 6.006 | 15. ninety hundredths         | 0.090 |
| 8. nine tenths             | 0.9   | 16. ninety thousandths        | 0.90  |

Compare. Write  $<$ ,  $>$ , or  $=$ .

1.  $4.735 \bigcirc 4.74$

2.  $2.549 \bigcirc 2.549$

3.  $3.207 \bigcirc 3.027$

4.  $8.25 \bigcirc 8.250$

5.  $5.871 \bigcirc 5.781$

6.  $9.36 \bigcirc 9.359$

7.  $1.538 \bigcirc 1.54$

8.  $7.036 \bigcirc 7.035$

9.  $6.700 \bigcirc 6.7$

Order from greatest to least.

10. 3.008; 3.825; 3.09; 3.18

11. 0.275; 0.2; 0.572; 0.725

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Complete the cross number puzzle. An entire box should be used for a decimal point.



### Across

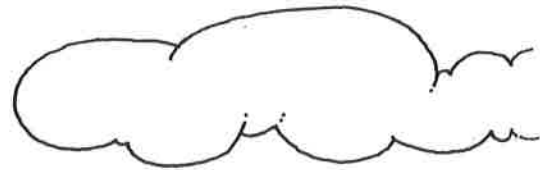
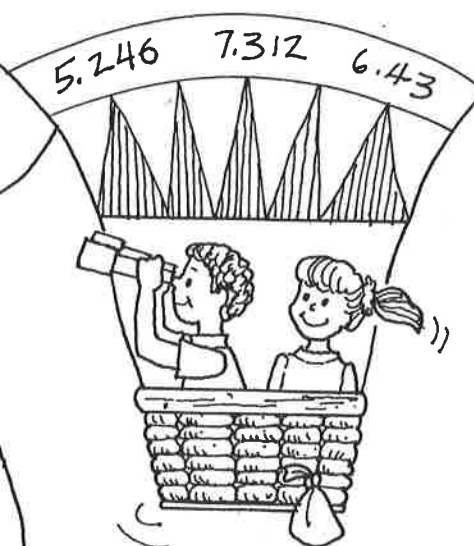
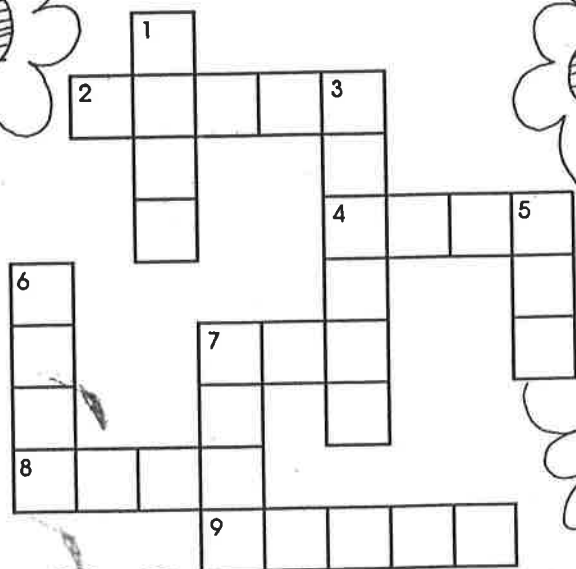
Round...

2. 346.28 to the nearest tenth
4. 1,672.56 to the nearest whole number
7. 5.163 to the nearest tenth
8. 39.22 to the nearest tenth
9. 54.899 to the nearest hundredth

### Down

Round...

1. 24.263 to the nearest tenth
3. 341.276 to the nearest hundredth
5. 299.61 to the nearest whole number
6. 4,123.499 to the nearest whole number
7. 5.246 to the nearest hundredth



$$\begin{array}{r} 1. \quad 24.9 \\ + 6.52 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 15.3 \\ + 5.915 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 12.5 \\ + 2.9 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 51.6 \\ + 4.0 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 21.951 \\ + 5.319 \\ \hline \end{array}$$

$$6. \quad 15.3 + 84.6 = \underline{\hspace{2cm}}$$

$$7. \quad 6.294 + 5.2 = \underline{\hspace{2cm}}$$

$$8. \quad 49.2 + 6.5 = \underline{\hspace{2cm}}$$

$$9. \quad 9.264 + 842.26 = \underline{\hspace{2cm}}$$

$$\begin{array}{r} 10. \quad 12.1 \\ - 5.8 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 15.26 \\ - 5.49 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 4.59 \\ - 2.0 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 83.49 \\ - 2.95 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 8.00 \\ - 5.12 \\ \hline \end{array}$$

$$15. \quad 51.2 - 14.1 = \underline{\hspace{2cm}}$$

$$16. \quad 4 - 1.12 = \underline{\hspace{2cm}}$$

$$17. \quad 96.0 - 4.8 = \underline{\hspace{2cm}}$$

$$18. \quad 19.5 - 13.04 = \underline{\hspace{2cm}}$$

$$\begin{array}{r} 0.6 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 0.005 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 0.31 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 9.3 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 6.4 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 4.8 \\ \times 61 \\ \hline \end{array}$$

$$\begin{array}{r} 6.3 \\ \times 37 \\ \hline \end{array}$$

$$\begin{array}{r} 0.97 \\ \times 23 \\ \hline \end{array}$$

$$\begin{array}{r} 0.028 \\ \times 31 \\ \hline \end{array}$$

$$\begin{array}{r} 3.21 \\ \times 14 \\ \hline \end{array}$$

1 a.

$$79 \overline{) 7.505}$$

1 b.

$$34 \overline{) 57.8}$$

2 a.

$$12 \overline{) 93.12}$$

2 b.

$$20 \overline{) 20.00}$$

3 a.

$$24 \overline{) 23.616}$$

3 b.

$$46 \overline{) 92.0}$$

Transform the problems so that you get a *whole-number divisor*. Then, divide.

1 a.  $14 \div 0.5 =$  \_\_\_\_\_

$$\begin{array}{r} 0.5 \overline{)14.0} \\ \underline{10} \phantom{0} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

1 b.  $22.6 \div 0.02 =$  \_\_\_\_\_

2 a.  $6 \div 0.08 =$  \_\_\_\_\_

2 b.  $13.6 \div 0.04 =$  \_\_\_\_\_

3 a.  $13 \div 0.4 =$  \_\_\_\_\_

3 b.  $22.05 \div 0.05 =$  \_\_\_\_\_

Solve each problem.

1. Jimmy bought a CD for \$15.95. If he paid the clerk \$20, how much change did he receive?

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2. Carlos bought two puzzles. Each one cost \$4.95 and he paid \$0.59 in tax. How much was his total bill?

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3. Jennifer bought two music videos on sale. She paid \$20 and received \$3.90 back in change. The tax on the bill was \$0.76. If each video cost the same amount of money, how much did one cost before tax?

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4. Sky bought a new poster for his room. The poster was originally \$14.50, but the sale price was \$2.35 less. If he paid the clerk \$15, how much change did he get back?

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5. Akiko wanted to buy a CD for \$14.95 and a new poster for \$23.95. She had \$40.00 with her. Was that enough to buy both the CD and the poster?

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## Solving Word Problems

Read each problem and fill in the bubble next to the correct answer.

Work area

1. Ben was framing a small herb garden for his mother. He wants the garden to be 30 inches long and 45 inches wide. Which piece of wood will Ben need to purchase to frame the garden?

☐ 15 foot piece of wood      ☐ 12 foot piece of wood  
☐ 9 foot piece of wood      ☐ 6 foot piece of wood

2. Over summer break Maria bought 5 fruit smoothies for \$3.79 each and 3 fruit smoothies for \$2.99 each. How much money did Maria spend on smoothies over summer break?

☐ \$24.38      ☐ \$28.88  
☐ \$27.92      ☐ \$19.89

3. The fifth-grade class sold 415 granola bars. Each granola bar costs \$1.00. The class donated 75% of the money earned from granola bar sales to the school library. How much did the fifth grade class donate to the school library?

☐ \$410.75      ☐ \$311.25  
☐ \$348.00      ☐ \$401.90

$$75\% = .75$$

4. Elise bought 3 dresses for \$12.48 each and two pairs of slacks for \$14.78 each. She also had to pay 5% sales tax on her purchases. How much money did Elise spend in all?

☐ \$65.85      ☐ \$71.49  
☐ \$70.35      ☐ \$66.15

$$5\% = .05$$

5. There are 28 students in Sharon's class. One-fourth of the students were absent on Monday. How many students were present on Monday?

☐ 16 students      ☐ 7 students  
☐ 9 students      ☐ 21 students

To add mixed numbers:

Find a common denominator.

Add the whole numbers.

Add the fractions.

Reduce to lowest terms.

Find a common denominator.

$$\begin{array}{r} 9 \frac{2}{3} \\ + 7 \frac{3}{4} \\ \hline \end{array} = \begin{array}{r} 9 \frac{8}{12} \\ + 7 \frac{9}{12} \\ \hline 16 \frac{17}{12} = 17 \frac{5}{12} \end{array}$$

To subtract mixed numbers:

Find a common denominator.

Regroup if needed.

Subtract the fractions.

Subtract the whole numbers.

Find a common denominator.

Regroup

$$\begin{array}{r} 6 \frac{1}{3} \\ - 3 \frac{1}{2} \\ \hline \end{array} = \begin{array}{r} 5 \cancel{6} \frac{2}{6} \\ - 3 \frac{3}{6} \\ \hline \end{array} \begin{array}{r} + \frac{6}{6} \\ \hline \end{array} \begin{array}{r} 5 \frac{8}{6} \\ - 3 \frac{3}{6} \\ \hline 2 \frac{5}{6} \end{array}$$

$$\begin{array}{r} 4 \frac{3}{5} \\ + 2 \frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 2 \frac{1}{3} \\ + 5 \frac{1}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 6 \frac{8}{9} \\ + 4 \frac{7}{9} \\ \hline \end{array}$$

$$\begin{array}{r} 5 \frac{1}{4} \\ - 4 \frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 8 \frac{1}{7} \\ - 2 \frac{5}{6} \\ \hline \end{array}$$

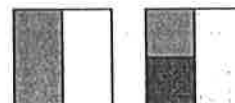
$$\begin{array}{r} 4 \\ - 2 \frac{1}{5} \\ \hline \end{array}$$



To multiply fractions, multiply the numerator by the numerator and the denominator by the denominator.

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

is the same as  $\frac{1}{2}$  of  $\frac{1}{2} = \frac{1}{4}$



$$\frac{2}{3} \times \frac{3}{4} = \frac{6}{12} = \frac{1}{2}$$

is the same as  $\frac{2}{3}$  of  $\frac{3}{4} = \frac{1}{2}$



## Example

$$\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$$

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

$$\frac{5}{6} \times \frac{1}{4} =$$

$$\frac{3}{7} \times \frac{1}{2} =$$

$$\frac{4}{9} \times \frac{1}{3} =$$

$$\frac{5}{12} \times \frac{2}{3} =$$

## Example

$$\frac{3}{5} \times \frac{1}{3} = \frac{3}{15} = \frac{1}{5}$$

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

$$\frac{4}{9} \times \frac{3}{4} =$$

$$\frac{5}{8} \times \frac{4}{5} =$$

$$\frac{3}{7} \times \frac{1}{4} =$$

$$\frac{1}{6} \times \frac{1}{9} =$$

1a.  $4\frac{1}{4} \times 1\frac{1}{4} =$

1b.  $\frac{6}{4} \times 4 =$

2a.  $2 \times \frac{1}{5} =$

2b.  $5\frac{4}{5} \times \frac{1}{5} =$

3a.  $\frac{1}{9} \times 3 =$

3b.  $4 \times 2 =$

4a.  $2\frac{2}{5} \times 9 =$

4b.  $5 \times 7\frac{2}{4} =$

5a.  $5 \times \frac{3}{5} =$

5b.  $3 \times \frac{2}{6} =$

Name \_\_\_\_\_

**COMMON CORE STANDARDS** CC.5.NF.3,  
CC.5.NF.7a, CC.5.NF.7b, CC.5.NF.7c

**Divide.**

1.  $2 \div \frac{1}{4} =$  \_\_\_\_\_

2.  $\frac{1}{7} \div 3 =$  \_\_\_\_\_

3.  $4 \div \frac{1}{5} =$  \_\_\_\_\_

4.  $3 \div \frac{1}{2} =$  \_\_\_\_\_

5.  $\frac{1}{8} \div 5 =$  \_\_\_\_\_

6.  $\frac{1}{9} \div 3 =$  \_\_\_\_\_

7.  $5 \div \frac{1}{6} =$  \_\_\_\_\_

8.  $8 \div \frac{1}{3} =$  \_\_\_\_\_

9.  $\frac{1}{5} \div 5 =$  \_\_\_\_\_



1. A baker has 6 small bags of flour. Each bag weighs 1 pound. She divides each bag into thirds. How many  $\frac{1}{3}$ -pound bags of flour does the baker have?

2. Merrill cuts 6 apple pies into halves. How many  $\frac{1}{2}$ -size pie pieces does she have?

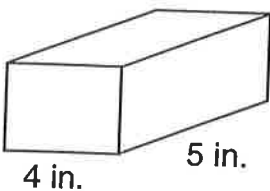
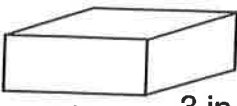
\_\_\_\_\_

\_\_\_\_\_

Determine the area of each of the following figures.

<p><b>7.</b></p> <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 10px;"> <p>3</p> <p>_____ square units</p> <p>Perimeter _____</p> </div> </div>	<p><b>8.</b></p> <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 10px;"> <p>4</p> <p>8</p> <p>_____ square units</p> <p>Perimeter _____</p> </div> </div>
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Determine the volume of each of the following rectangular prisms.  $l \times w \times h$

<p><b>1.</b></p> <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 20px;"> <p>3 in.</p> <p>4 in.</p> <p>5 in.</p> <p>_____ cubic inches</p> </div> </div>	<p><b>2.</b></p> <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 20px;"> <p>2 in.</p> <p>5 in.</p> <p>3 in.</p> <p>_____ cubic inches</p> </div> </div>
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Compare. Write  $<$ ,  $>$ , or  $=$ .

13. 9 ft  4 yd

14. 4 mi  15,840 ft

15. 5 yd 1 ft  192 in.

16. 10 gal  60 qt

17. 480 fl oz  24 pt

18. 16 cups  1 gal

19. 18 T  36,000 lb

20. 145 oz  9 lb

21. 1 T  3,400 lb

22. 45 hg  4.5 kg

23. 770 m  7 km

24. 875 cL  875 mL