

Name _____
Grade 6, 7, 8

Math Summer Work

Each student will receive a *Math Packet*. The *Math Packet* covers a variety of topics and reinforces material already introduced in class. This packet is meant to assist your child with maintaining math skills. Please use a separate sheet of paper for completing any of the work if there is not enough room on the pages (label your work: name, page, number, etc. and organize work neatly if turning it in).

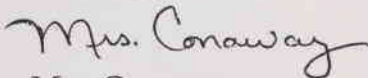
To receive full credit as your first Math grade, you will need to complete each page and problem of the *Math Packet*. I suggest you do at least one page per week in order to be done by September's start of school. Upon your return to school, you will have a **limited** amount of time to turn in your *Math Packet* to me. Please do not save this work for the last weekend before school starts as it would then be overwhelming.

Science Summer Work

Read the Current Science Articles. Answer the skill builder questions (worksheets) that go along with each of the articles and turn (worksheets) in for a grade. This will count as your first science grade when you return to school. You do not need to return the Current Science Article, but keep it in a safe place so you can answer your questions.

Have a safe and fun summer!

Sincerely,


Mrs. Conaway

Addition

Add.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>
1.	$\begin{array}{r} 38 \\ +41 \\ \hline \end{array}$	$\begin{array}{r} 350 \\ +762 \\ \hline \end{array}$	$\begin{array}{r} 954 \\ +3869 \\ \hline \end{array}$	$\begin{array}{r} 581 \\ 4263 \\ +785 \\ \hline \end{array}$	$\begin{array}{r} 16927 \\ 3846 \\ +79217 \\ \hline \end{array}$

2.	$\begin{array}{r} 17 \\ 23 \\ 44 \\ +26 \\ \hline \end{array}$	$\begin{array}{r} 73 \\ 85 \\ 120 \\ +384 \\ \hline \end{array}$	$\begin{array}{r} 7263 \\ 4850 \\ 9218 \\ +3470 \\ \hline \end{array}$	$\begin{array}{r} 2148 \\ 3147 \\ 165 \\ 21533 \\ +4211 \\ \hline \end{array}$	$\begin{array}{r} 72683 \\ 38468 \\ 52170 \\ 30600 \\ +52119 \\ \hline \end{array}$
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3.	$\begin{array}{r} 4.2 \\ +2.3 \\ \hline \end{array}$	$\begin{array}{r} 3.5 \\ +2.63 \\ \hline \end{array}$	$\begin{array}{r} 4.25 \\ +.63 \\ \hline \end{array}$	$\begin{array}{r} .721 \\ 1.483 \\ +2.162 \\ \hline \end{array}$	$\begin{array}{r} 24.3 \\ 3.142 \\ +17.88 \\ \hline \end{array}$
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4.	$\begin{array}{r} .4 \\ 1.2 \\ 7.3 \\ +2.5 \\ \hline \end{array}$	$\begin{array}{r} .7 \\ 2 \\ 3.84 \\ +2.56 \\ \hline \end{array}$	$\begin{array}{r} .082 \\ .075 \\ .036 \\ +.453 \\ \hline \end{array}$	$\begin{array}{r} 1.23 \\ 22.7 \\ 3.187 \\ .7 \\ +4.83 \\ \hline \end{array}$	$\begin{array}{r} 3.126 \\ .42 \\ 5.3 \\ .681 \\ +24.2 \\ \hline \end{array}$
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Write each answer in simplest form.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>
5.	$\begin{array}{r} \frac{2}{5} \\ +\frac{2}{5} \\ \hline \end{array}$	$\begin{array}{r} 1\frac{3}{4} \\ +2\frac{3}{4} \\ \hline \end{array}$	$\begin{array}{r} \frac{2}{3} \\ +\frac{1}{2} \\ \hline \end{array}$	$\begin{array}{r} 1\frac{5}{9} \\ +\frac{2}{3} \\ \hline \end{array}$	$\begin{array}{r} 3\frac{7}{10} \\ +4\frac{5}{8} \\ \hline \end{array}$

6.	$\begin{array}{r} \frac{1}{8} \\ \frac{3}{8} \\ +\frac{2}{8} \\ \hline \end{array}$	$\begin{array}{r} 3\frac{3}{5} \\ 4\frac{4}{5} \\ +\frac{3}{5} \\ \hline \end{array}$	$\begin{array}{r} \frac{2}{5} \\ +\frac{1}{2} \\ \hline \end{array}$	$\begin{array}{r} 2\frac{3}{4} \\ +4\frac{1}{2} \\ \hline \end{array}$	$\begin{array}{r} \frac{1}{3} \\ +1\frac{3}{4} \\ \hline \end{array}$
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Subtraction

Subtract.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>
1.	$\begin{array}{r} 74 \\ -32 \\ \hline \end{array}$	$\begin{array}{r} 62 \\ -46 \\ \hline \end{array}$	$\begin{array}{r} 305 \\ -153 \\ \hline \end{array}$	$\begin{array}{r} 728 \\ -259 \\ \hline \end{array}$	$\begin{array}{r} 4256 \\ -673 \\ \hline \end{array}$

2.	$\begin{array}{r} 3081 \\ -1293 \\ \hline \end{array}$	$\begin{array}{r} 4216 \\ -786 \\ \hline \end{array}$	$\begin{array}{r} 53142 \\ -2483 \\ \hline \end{array}$	$\begin{array}{r} 42806 \\ -41732 \\ \hline \end{array}$	$\begin{array}{r} 30125 \\ -2617 \\ \hline \end{array}$
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3.	$\begin{array}{r} .5 \\ -.3 \\ \hline \end{array}$	$\begin{array}{r} 4.4 \\ -2.2 \\ \hline \end{array}$	$\begin{array}{r} .314 \\ -.042 \\ \hline \end{array}$	$\begin{array}{r} 1.206 \\ -.317 \\ \hline \end{array}$	$\begin{array}{r} 4.25 \\ -1.32 \\ \hline \end{array}$
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4.	$\begin{array}{r} 8.73 \\ -4.2 \\ \hline \end{array}$	$\begin{array}{r} .546 \\ -.01 \\ \hline \end{array}$	$\begin{array}{r} 7.38 \\ -2.5 \\ \hline \end{array}$	$\begin{array}{r} 41.687 \\ -2.3 \\ \hline \end{array}$	$\begin{array}{r} 36.4 \\ -9 \\ \hline \end{array}$
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5.	$\begin{array}{r} 7.8 \\ -3.4 \\ \hline \end{array}$	$\begin{array}{r} 4.26 \\ -1.731 \\ \hline \end{array}$	$\begin{array}{r} 12.6 \\ -3.003 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ -1.25 \\ \hline \end{array}$	$\begin{array}{r} 30 \\ -2.461 \\ \hline \end{array}$
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Write each answer in simplest form.

6.	$\begin{array}{r} \frac{7}{8} \\ -\frac{5}{8} \\ \hline \end{array}$	$\begin{array}{r} \frac{9}{10} \\ -\frac{3}{10} \\ \hline \end{array}$	$\begin{array}{r} 5\frac{7}{12} \\ -2\frac{4}{12} \\ \hline \end{array}$	$\begin{array}{r} 3\frac{8}{9} \\ -2\frac{5}{9} \\ \hline \end{array}$	$\begin{array}{r} 6\frac{3}{4} \\ -\frac{1}{4} \\ \hline \end{array}$
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7.	$\begin{array}{r} \frac{7}{8} \\ -\frac{3}{4} \\ \hline \end{array}$	$\begin{array}{r} \frac{5}{7} \\ -\frac{1}{2} \\ \hline \end{array}$	$\begin{array}{r} 7\frac{2}{3} \\ -4\frac{1}{4} \\ \hline \end{array}$	$\begin{array}{r} 3\frac{5}{6} \\ -\frac{1}{4} \\ \hline \end{array}$	$\begin{array}{r} 9\frac{9}{10} \\ -2\frac{3}{8} \\ \hline \end{array}$
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8.	$\begin{array}{r} 4\frac{3}{5} \\ -2\frac{5}{6} \\ \hline \end{array}$	$\begin{array}{r} 3\frac{5}{8} \\ -1\frac{9}{10} \\ \hline \end{array}$	$\begin{array}{r} 1\frac{2}{3} \\ -\frac{5}{6} \\ \hline \end{array}$	$\begin{array}{r} 4\frac{4}{5} \\ -1\frac{7}{8} \\ \hline \end{array}$	$\begin{array}{r} 13\frac{2}{9} \\ -6\frac{5}{6} \\ \hline \end{array}$
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Multiplication

Multiply.

$$\begin{array}{r} a \\ 1. \quad 73 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} b \\ 428 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} c \\ 4216 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} d \\ 3082 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 31 \\ \times 26 \\ \hline \end{array}$$

$$\begin{array}{r} 426 \\ \times 31 \\ \hline \end{array}$$

$$\begin{array}{r} 531 \\ \times 175 \\ \hline \end{array}$$

$$\begin{array}{r} 7042 \\ \times 102 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad .32 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} .13 \\ \times .6 \\ \hline \end{array}$$

$$\begin{array}{r} 17.8 \\ \times .4 \\ \hline \end{array}$$

$$\begin{array}{r} 312 \\ \times .008 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad .31 \\ \times .31 \\ \hline \end{array}$$

$$\begin{array}{r} 4.23 \\ \times .032 \\ \hline \end{array}$$

$$\begin{array}{r} 411.6 \\ \times .306 \\ \hline \end{array}$$

$$\begin{array}{r} 38.04 \\ \times 1.32 \\ \hline \end{array}$$

Write each answer in simplest form.

$$5. \quad a \quad \frac{3}{4} \times \frac{5}{7}$$

$$b \quad \frac{5}{9} \times \frac{6}{7}$$

$$c \quad 1\frac{2}{3} \times \frac{3}{5}$$

$$d \quad 2\frac{2}{5} \times 3\frac{3}{4} \times \frac{1}{2}$$

Division

Divide.

*a**b**c**d*

1. $3 \overline{)72}$

$4 \overline{)136}$

$7 \overline{)940}$

$6 \overline{)4955}$

2. $12 \overline{)84}$

$14 \overline{)448}$

$16 \overline{)5146}$

$24 \overline{)16884}$

3. $7 \overline{)20.3}$

$8 \overline{).0144}$

$.9 \overline{)1.854}$

$.006 \overline{).024}$

4. $1.6 \overline{).8}$

$.12 \overline{)54}$

$3.1 \overline{)2.232}$

$.45 \overline{).5535}$

Write each answer in simplest form.

*a**b**c**d*

5. $\frac{7}{8} \div \frac{2}{3}$

$\frac{9}{10} \div \frac{3}{5}$

$2\frac{2}{5} \div \frac{3}{10}$

$2\frac{2}{3} \div 1\frac{1}{9}$

Proportions and Per cent

Solve each of the following.

a

1. $\frac{n}{6} = \frac{24}{36}$

2. $\frac{52}{n} = \frac{2}{3}$

3. $\frac{n}{75} = \frac{8}{100}$

b

$\frac{10}{12} = \frac{n}{6}$

$\frac{n}{56} = \frac{6}{8}$

$\frac{14}{15} = \frac{n}{30}$

c

$\frac{7}{8} = \frac{42}{n}$

$\frac{75}{100} = \frac{n}{20}$

$\frac{64}{n} = \frac{12}{15}$

Complete the following.

a

4. _____ is 25% of 300.

5. _____ is 5% of 72.

6. _____ is $10\frac{1}{2}\%$ of 90.

7. _____ is 28.5% of 250.

8. _____ is 8.25% of 32.

9. _____ is 110% of 45.

10. _____ is 5.5% of 1450.

b

_____ is 20% of 450.

_____ is 3% of 240.

_____ is 100% of 754.

_____ is 75% of 392.

_____ is 40% of 1250.

_____ is 250% of 50.

_____ is 95% of 650.

Problems

Solve each problem.

1. As gear A revolves twice, gear B revolves five times. Gear B has revolved 30 times. How many times has gear A revolved?

Gear A has revolved _____ times.

2. At Elmwood School the ratio of boys to girls is 5 to 6. There are 75 boys at the school. How many girls are there?

There are _____ girls.

3. The ratio of teachers to boys in problem 2 is 1 to 15. How many teachers are at the school?

_____ teachers are in the school.

4. Twelve per cent of the employees were either late or absent today. There are 150 employees in all. How many were either late or absent today?

_____ were either late or absent.

5. Mr. Jackson bought a new suit for \$85. There is a 6% sales tax. How much was the sales tax on this purchase?

He will pay \$_____ sales tax.

6. Of the 1,540 students in Haley School 45% are boys. How many boys are in the school?

_____ boys are in the school.

7. The sales tax is 5.5%. How much is the sales tax on a \$200 purchase?

The tax would be \$_____.

8. What would the tax be in problem 7 on a \$540 purchase?

The tax would be \$_____.

1.

2.

3.

4.

5.

6.

7.

8.

Per cent and Interest

Complete the following.

a

1. _____ is 10% of 750.

2. _____ is 16% of 250.

3. .84 is 3% of _____.

4. 220 is 110% of _____.

5. 35 is _____% of 500.

6. 54.6 is _____% of 182.

b

_____ is 20% of 75.

_____ is 7.5% of 42.

98 is 25% of _____.

6.6 is 5.5% of _____.

26 is _____% of 325.

250 is _____% of 200.

Complete the following.

	<i>principal</i>	<i>rate</i>	<i>time</i>	<i>interest</i>
7.	\$300	5%	2 years	_____
8.	\$640	$5\frac{1}{2}\%$	5 years	_____
9.	\$350	9%	$2\frac{1}{2}$ years	_____
10.	\$1260	8%	$1\frac{1}{2}$ years	_____
11.	\$800	$5\frac{1}{4}\%$	3 years	_____
12.	\$400	7%	2 years	_____

Problems

Solve each problem.

1. There are 1,525 students in a school. In the school election, 92% of the students voted. How many students voted?

_____ students voted.

2. Mr. Peters bought a radio for \$28. He also had to pay \$1.68 sales tax on the purchase price. What was the rate of sales tax?

The rate was _____%.

3. When a plane is loaded to 65% of capacity, there are 117 passengers on the plane. How many passengers will be on the plane when it is loaded to capacity?

_____ passengers will be on the plane.

4. Mildred deposited \$250 in a savings account that pays 6% interest a year. After 1 year, how much interest would be earned? What would be the total amount in the account?

\$_____ interest would be earned.

\$_____ would be in the account.

5. Mr. Walch borrowed \$750 for 1 year at 9% annual interest. How much interest did he have to pay?

He had to pay \$_____ interest.

6. Suppose you deposit \$1,400 at $6\frac{1}{2}\%$ annual interest. How much interest would be earned in $\frac{1}{2}$ year?

\$_____ interest would be earned.

7. Mrs. Rundles inspected 2,450 gizmos. She found 147 to be defective. What per cent of the gizmos she inspected were defective?

_____ % were found to be defective.

1.

2.

3.

4.

5.

6.

7.

CURRENT SCIENCE

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**CURRENT
SCIENCE.****Driven to Serve** (Page 4)**Vocabulary Challenge**

Match each numbered word or phrase with its correct description. Write the letter of the description in the space provided.

- | | |
|---------------------------------------|--|
| _____ 1. phlebotomist | A. acquired immune deficiency syndrome |
| _____ 2. pneumonia | B. diseases that don't usually affect healthy people |
| _____ 3. CD4+ T cell | C. disease-causing agents |
| _____ 4. pathogens | D. a person trained to draw blood samples |
| _____ 5. antibodies | E. a virus that attacks the human immune system |
| _____ 6. human immunodeficiency virus | F. a substance that is tested for the presence of the human immunodeficiency virus |
| _____ 7. antigens | G. proteins created by the immune system in response to the presence of foreign agents |
| _____ 8. opportunistic infections | H. a type of white blood cell that the human immunodeficiency virus attacks |
| _____ 9. AIDS | I. an infection that strikes many people who have AIDS |
| _____ 10. saliva | J. foreign agents that trigger an immune response |

Bot Man (Page 6)**Short Answer**

- What is the difference between a variable and a constant? _____

- What does Newton's third law of motion state? _____

- What is velocity? _____

- When you walk down the street, the ground pushes back on your feet with a force that is equal and opposite to the force your feet apply each time they push against the pavement. Is that an example of Newton's third law of motion? Explain your answer. _____

- Did animatronics engineers design the Na'vi creatures in the movie *Avatar*? Explain your answer. _____

SKILLBUILDERS

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**CURRENT
SCIENCE.****Mercury Rising** (Page 8)**Fill in the Blanks***Write the word or words that best complete each sentence.*

1. The four planets closest to the sun are all _____.
2. Mars is almost four times the distance from the sun that _____ is.
3. _____ is equal to mass divided by volume.
4. Because Mercury is so dense, astronomers believe that it has a high concentration of the element _____.
5. A day on Mercury is _____ hours long.
6. The difference between the minimum and maximum surface temperatures on Earth is _____ degrees Celsius.
7. _____ is closest to Earth in width.
8. A year on Mars is _____ Earth days longer than a year on Venus.
9. Earth and _____ rotate at the same rate.
10. The spacecraft _____ will begin orbiting Mercury next year.

The Sound of Silence (Page 10)**Multiple Choice***Choose the response that best completes each statement or answers each question. Write the letters in the spaces.*

- _____ 1. Which term best describes the nature of the eastern kingbird? (A) combative, (B) gentle, (C) sneaky
- _____ 2. The windpipe is also known as the (A) esophagus, (B) larynx, (C) trachea.
- _____ 3. What is the main cause of the decline of songbirds in North America? (A) habitat loss, (B) pesticides, (C) overhunting
- _____ 4. What is the name of the structure that birds use to sing? (A) syrette, (B) syringe, (C) syrinx
- _____ 5. What color is the breast of a Kentucky warbler? (A) red, (B) white, (C) yellow
- _____ 6. Which term would you use to describe the purple martin? (A) flightless, (B) migratory, (C) black-and-white
- _____ 7. Which type of language do some birds use to communicate? (A) body, (B) telepathic, (C) written
- _____ 8. Male birds sing to (A) attract female birds, (B) warn away other males, (C) both A and B.
- _____ 9. Which term best describes bright-colored birds? (A) aggressive, (B) large, (C) passive
- _____ 10. Many pesticides are toxic to which system in birds? (A) digestive, (B) hormonal, (C) sensory

SKILLBUILDERS

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**CURRENT
SCIENCE.****Discoveries** (Page 13)**Word Search**

A Y K O Y A W Y K L I M Y G M L R
 C R T L E I A R B P A I E R I O T
 H A H K A N Y X R L R N P E L K A
 L L I H L R E A G A E A O A D I S
 O L L S E E S S H O X L T D P N U
 N I O T Q A I T U I E P O C D A P
 E P R E U W N E J N L O S O R B E
 T A E Q A E G R I H V R I L R O R
 E C R Z T S E D O G E L N O E T C
 L D E O O T K E P T R O T N A R R
 G O L A R B E R E C T A E R G O O
 I M F B N R O H R C E E F T R L C
 P E V Y M E T C E E S X A R A T E
 O P A N C A K E C R O C Z E N J A
 R T U U C D N E O L R N W R C O R
 D T Q E O O N R E L O H K C A L B

1. a thin, flexible tube
2. a prehistoric crocodile with a head shaped like a popular breakfast dish
3. a type of squid
4. a volcanic eruption that happened 73,000 years ago
5. an object in the universe that outshines a galaxy of 100 billion stars
6. a small blood vessel
7. a prehistoric crocodile that had buckteeth
8. an object that exists at the center of a galaxy (two words)
9. a form of an element whose atoms have a different number of neutrons
10. a line of latitude that runs through Sumatra
11. a large blood vessel
12. a prehistoric crocodile that was as big as a school bus
13. a large vein at the base of the human brain (two words)
14. the name of a galaxy (two words)