Harbor Country Day School

Summer Math Packet
For Students Entering Grade 5

Please complete this math packet throughout the summer and bring it on the first day of school.

Name _____

Our fourth graders had a busy year learning new math skills. Mastery of all these skills is extremely important in order to develop a solid math foundation. The fifth grade math program will add onto these fourth grade skills, so any time spent learning or reinforcing these concepts will be very beneficial for your child. Each year builds upon the previous year's skills in math. Student mastery of the basic math skills is as important to success in future mathematical procedures and reasoning as learning the alphabet is to reading and writing.

How to make sure your child is prepared for fifth grade:

- Have students practice their math facts daily and fill our the **Multiplication and Division Fluency and Automaticity Log** weekly.
- Have your child complete one page (both sides) each week of the **Fifth Grade Math Reinforcement Packet**.
- After your child has completed the math problems, if you feel your child is still struggling on a certain concept and needs further practice, you can:
    - Visit some of the web sites listed on the next page.
    - Make up problems of your own for additional practice.

Multiplication and Division Fluency and Automaticity Log

Directions

- Students should practice their math facts daily.
- They should use the Quick Math App (https://itunes.apple.com/us/app/quick-math-multiplication/id537802071?mt=8) and practice the beginner and intermediate levels of multiplication and division.
- At the end of each week, record your child's time for each level on the Multiplication and Division Fluency and Automaticity Log
- They should be able to complete each level in 35 seconds or less by the first day of fifth grade.

Fifth Grade Math Reinforcement Packet

Directions

- Have your child complete one page (both sides) each week of the Fifth Grade Math Reinforcement Packet.
- After your child has completed the math problems, if you feel your child is still struggling on a certain concept and needs further practice, you can:
    - Visit some of the web sites listed on the next page.
    - Make up problems of your own for additional practice.
    - Complete pages on this topic in one of the fourth grade workbooks that was sent home at the end of the year

Please return this completed packet in September to your fifth grade teacher.

Our fourth graders had a busy year learning new math skills. Mastery of all these skills is extremely important in order to develop a solid math foundation. The fifth grade math program will add onto these fourth grade skills, so any time spent learning or reinforcing these concepts will be very beneficial for your child. Each year builds upon the previous year's skills in math. Student mastery of the basic math skills is as important to success in future mathematical procedures and reasoning as learning the alphabet is to reading and writing.

How to make sure your child is prepared for fifth grade:

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Fifth Grade Math Reinforcement Packet

Directions

- Have your child complete one page (both sides) each week of the Fifth Grade Math Reinforcement Packet.
- After your child has completed the math problems, if you feel your child is still struggling on a certain concept and needs further practice, you can:
    - Visit some of the web sites listed on the next page.
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Please return this completed packet in September to your fifth grade teacher.

FOURTH GRADE GRADE LEVEL EXPECTATIONS IN MATHEMATICS

When entering fifth grade this is what is expected that your child should already know:

Whole Numbers:

- Read and write numbers to 1,000,000.
- Know place value to 1,000,000. Ex. 25,068 is 2 ten thousand, 5 thousand, 0 hundreds, 6 tens and 8 ones. 3. List the first twelve multiples of a given one-digit whole number.
- Find all the factors of 1-digit and 2-digit numbers
- Know some numbers are called prime numbers. Some prime numbers are 2, 3, 5, 7 and 11; have exactly two factors one and itself.

Four Operations of Whole Numbers

- Add, subtract, multiply, and divide whole numbers fluently.
- Multiply numbers up to three-digit by two-digit numbers and by 10.
- Divide numbers up to three-digits by one-digit numbers and by 10.
- Use the relationship between multiplication and division to check results and to find the value of the unknowns in equations such as ? ÷ 10 = 25, 10 x 25 = 250 so ? = 250; 125 ÷ ? = 25, 125 ÷ 25 = 5 so ? = 5.
- Solve multi-step word problems involving whole numbers

Fractions

- Locate fractions on a number line
- Write improper fractions as mixed numbers and mixed numbers as improper fractions.
- Compare and order up to three fractions with unlike denominators

Operations of Fractions

- Add, subtract, and multiply fractions with like and unlike denominators
- Find the value of an unknown in equations such as 1/8 + _____ = 5/8 or ¾ - _____ = ½.
- Solve multi-step word problems involving fractions and mixed numbers

Decimals

- Read and write a number that contains whole numbers and decimals up to the thousandths (.001) place.
- Know place value of decimals up to the thousandths (.001) place.
- Locate the decimals in tenths and hundredths on a number line.
- Read, write, interpret, and compare decimals up to three decimal places (thousandths).
- Convert decimals in tenths, hundredths, and thousandths to fraction and decimal forms.

The Four Operations of Decimals

- Add and subtract decimals up to 2 decimal places.
- Multiply and divide decimals up to 2 decimal places by a one-digit whole number.
- Solve multi-step word problems involving decimals

Measurement

- Calculate conversions from one unit to a larger or smaller unit of measure: meters to centimeters, kilograms to grams, liters to milliliters, hours to minutes, minutes to seconds, years to months, weeks to days, feet to inches, ounces to pounds.

Geometry

- Identify and draw angles, rays, lines, and line segments.
- Identify acute, obtuse, and right angles
- Measure angles using a protractor
- Identify scalene, isosceles, and equilateral triangles
- Identify different quadrilaterals such as square, rectangle, parallelogram, and trapezoid
- Identify and draw perpendicular, parallel and intersecting lines.
- Identify basic geometric shapes including isosceles, equilateral and right triangles.
- Recognize plane figures that have line symmetry. (Where you can divide a shape in half and both halves are exactly the same.
- Identify how many degrees and right angles are in ¼, ½, and ¾ turns.
- Find the measure of a marked unknown angle in a quadrilateral, line, or angle greater than 180 degrees

Area and Perimeter

- Find area and perimeter of quadrilaterals
- Find the perimeter of a composite figure
- Find the area of a shape made up of squares and rectangles
- Find the side of a square or rectangle given its perimeter or area and possibly one side.

Bar Graphs and Line Plots

- Construct line plots and bar graphs from given data.
- Interpret information based on line plots and bar graphs

Volume

- Find the volume of a cuboid
- Find the volume of rectangular prisms

Excellent Websites for Fun Learning and Reinforcement of Math Skills:

www.wildmath.com

Select "Play the game". Select addition, subtraction or multiplication and grade. You can race to beat your time. www.harcourtschool.com Click the red box, select math, select HSPMath, select Michigan, click on the "4" ball or "5" ball for a challenge. Select a game.

www.aplusmath.com

Go under "Flashcards" or "Games". They can practice adding, subtracting and multiplying. It is very important to know the addition, subtraction, multiplication, and division facts from memorization or within a couple seconds.

www.mathisfun.com

At the home screen select games and pick a game to play.

https://illuminations.nctm.org/

In the search section. select "interactions" then select grade level "3-5". Click on Search.

www.aaamath.com

At the top pick "Fourth" or "Fifth" for a challenge. Choose any of the activities like multiplication then select "play" option toward the top of the screen. 20 Questions and Countdown games are good ones.

www.funbrain.com

Lots of fun games to choose from.

Multiplication and Division Fluency and Automaticity Log

Name:_____

In order to be prepared for 5th grade, students must be able to complete the beginner and intermediate levels of multiplication and division on the Quick Math App (https://itunes.apple.com/us/app/quick-math-multiplication/id537802071?mt=8) in **35 seconds or less**. Please have your child practice these facts daily over the summer using the app or a study tool of your choice. At the end of each week, record your child's time for each level. At the end of the year, your teacher sent home how your child scored, so you have a base line.

"Developing rapid recall of arithmetic facts, automaticity, remains a concern to elementary education teachers in the twenty-first century. By the time students reach fourth grade, it is expected that they have a fluent recall of the basic facts in addition, subtraction, multiplication, and division, giving them the foundation to proceed to higher level mathematical computation and problem solving. The problem is each year students come to fifth grade without automaticity of multiplication fact recall and consequently have no foundation upon which to build higher-level computational skills. Students think they know their facts. In actuality, they only know how to use various strategies to arrive at the answer without automaticity, or they do not know the multiplication facts at all. To the experienced teacher, this signals potential problems in subsequent math success."

-Patricia Lehner Virginia Beach City Public Schools

June

Goal: Complete each level in 35 seconds or less	End of Fourth Grade Year (Completed by teacher and sent home at the end of the year)	Week 1 Date:	Week 2 Date:	
Multiplication Beginner Time				
Multiplication Intermediate Time				
Division Beginner Time				
Division Intermediate Time				

July

Goal: Complete each level in 35 seconds or less	Week 1 Date:	Week 2 Date:	Week 3 Date:	Week 4 Date:
Multiplication Beginner Time				
Multiplication Intermediate Time				
Division Beginner Time				
Division Intermediate Time				

August

Goal: Complete each level in 35 seconds or less	Week 1 Date:	Week 2 Date:	Week 3 Date:	Week 4 Date:
Multiplication Beginner Time				
Multiplication Intermediate Time				
Division Beginner Time				
Division Intermediate Time				

June Week 1

1. Consider the number 951,076

   (a) Write the number in words.

   _____

   (b) What digit is in the ten thousands place? _____

   (c) 951,076 = 950,000 + 70 + _____

   (d) What number is 10,000 more than this number? _____

   (e) What number is 100 less than this number? _____

   (f) Round the number to the nearest hundred thousand. _____

   (g) Which is smaller, 951,076 or 951,067? _____

2. (a) Find all the factors of 60.

   _____

   (b) Which of these factors are prime numbers?

   _____

3. Find the common factors of 15 and 18.

4. Find the positive common multiples of 6 and 9 smaller than the product of 6 and 9.

415

Multiply.

1.	6 x 10 =	16.	60 x 10 =
2.	10 x 10 =	17.	60 x 20 =
3.	16 x 10 =	18.	60 x 3 =
4.	8 x 10 =	19.	12 x 3 x 5 x 10 =
5.	10 x 10 =	20.	40 x 5 =
6.	18 x 10 =	21.	40 x 10 =
7.	19 x 10 =	22.	40 x 15 =
8.	20 x 10 =	23.	40 x 20 =
9.	20 x 20 =	24.	40 x 30 =
10.	14 x 10 =	25.	42 x 10 =
11.	14 x 20 =	26.	42 x 5 =
12.	14 x 30 =	27.	42 x 15 =
13.	14 x 40 =	28.	54 x 10 =
14.	40 x 7 =	29.	9 x 5 x 6 =
15.	40 x 70 =	30.	54 x 15 =

5. The figures below form a pattern.

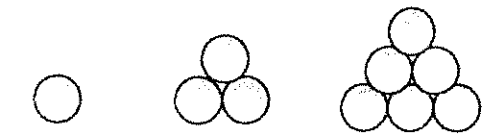


Figure 1 Figure 2 Figure 3 Figure 4 Figure 5

(a) Continue the pattern to draw Figures 4 and 5.

(b) Complete the table by observing the pattern and extending it.

Figure	1	2	3	4	5	6	7
Number of circles	1	3	6				

(c) Describe the pattern in the numbers. How did you find the number of circles for figures 6 and 7 without drawing the figures?

6. Solve using mental math:

(a) 1,000 - 843 = _____ (b) 458 + 998 = _____

(c) 4,539 - 997 = _____ (d) 5,984 - 405 = _____

(e) 43 x 99 = _____ (f) 16 x 25 = _____

7. Find the number represented by *n* that makes each equation true.

(a) $n - 35{,}000 = 42{,}000$

n = _____

(b) $863{,}000 + n = 872{,}000$

n = _____

(c) $n \times 7 = 42{,}000$

n = _____

(d) $360{,}000 \div n = 40{,}000$

n = _____

(e) $64 \times 2 = n \times 4$

n = _____

(f) $56 - 8 \times 5 + 4 = n$

n = _____

(g) $72 \div (4 + 8) = n \div 12$

n = _____

(h) $n = 200 - 100 \div 10 \times (4 + 6)$

n = _____

419 Add or subtract. All answers must be in simplest form.

1.	$1-\frac{1}{3}=$	16.	$1-\frac{1}{8}-\frac{2}{8}=$
2.	$1-\frac{3}{5}=$	17.	$\frac{3}{32}+\frac{1}{4}+\frac{1}{8}+\frac{1}{32}=$
3.	$\frac{1}{5}+\frac{1}{5}+\frac{2}{5}=$	18.	$\frac{5}{6}-\frac{1}{6}=$
4.	$1-\frac{3}{7}=$	19.	$\frac{5}{6}-\frac{1}{3}=$
5.	$\frac{1}{7}+\frac{2}{7}+\frac{3}{7}=$	20.	$1-\frac{1}{4}-\frac{3}{8}=$
6.	$1-\frac{1}{2}-\frac{1}{4}=$	21.	$\frac{1}{3}+\frac{8}{30}+\frac{1}{10}=$
7.	$1-\frac{1}{4}-\frac{3}{8}=$	22.	$\frac{3}{8}+\frac{1}{2}+\frac{1}{8}=$
8.	$\frac{1}{8}+\frac{1}{4}+\frac{1}{4}=$	23.	$1-\frac{1}{5}=$
9.	$1-\frac{2}{9}-\frac{4}{9}=$	24.	$\frac{1}{5}+\frac{1}{10}+\frac{3}{10}=$
10.	$\frac{1}{6}+\frac{1}{3}+\frac{1}{18}=$	25.	$\frac{7}{10}-\frac{3}{5}=$
11.	$\frac{1}{6}+\frac{1}{6}+\frac{1}{3}=$	26.	$\frac{9}{40}+\frac{7}{40}=$
12.	$1-\frac{2}{3}=$	27.	$\frac{3}{4}-\frac{7}{12}=$
13.	$1-\frac{1}{4}=$	28.	$\frac{1}{16}+\frac{3}{16}+\frac{3}{8}=$
14.	$1-\frac{1}{3}-\frac{1}{3}=$	29.	$\frac{11}{12}-\frac{2}{3}=$
15.	$\frac{2}{9}+\frac{1}{3}+\frac{1}{9}=$	30.	$\frac{7}{12}-\frac{1}{3}-\frac{1}{4}=$

8. Jonas has $100. He wants to buy a game that costs $69.20, a book that costs $19.95. Does he have enough money to also buy a watch that costs $22.80? Use estimation.

9. Estimate the answer, and then multiply.

(a) 4,926 x 6

Estimate: _____

Answer: _____

(b) 8,058 x 4

Estimate: _____

Answer: _____

10. Estimate the answer, and then divide. Give your answer as quotient and remainder, if there is a remainder.

(a) 3,120 ÷ 8

Estimate: _____

Answer: _____

(b) 2,080 ÷ 6

Estimate: _____

Answer: _____

11. Estimate the answer, and then multiply.

(a) 386 x 54

Estimate: _____

Answer: _____

(b) 2,409 x 79

Estimate: _____

Answer: _____

426 Write as a whole or mixed number in simplest form.

1.	0.3 =	16.	2.4 =
2.	0.1 =	17.	2.9 =
3.	0.7 =	18.	2.6 =
4.	0.4 =	19.	2.77 =
5.	0.9 =	20.	3.6 =
6.	1.7 =	21.	3.75 =
7.	0.2 =	22.	3.05 =
8.	0.07 =	23.	3.1 =
9.	0.05 =	24.	4.1 =
10.	0.09 =	25.	4.01 =
11.	1.5 =	26.	4.11 =
12.	1.4 =	27.	4.08 =
13.	1.75 =	28.	4.8 =
14.	2.2 =	29.	4.9 =
15.	2.04 =	30.	4.95 =

12. During the last half of a year, Mr. Wilson's salary was $1,985 each month. He saved $4,025 during that time and spent the rest. How much did he spend?

13. A bottle contains blue beads and red beads. The number of red beads is 4 times the number of blue beads. If there are 3,568 red beads, how many more red beads than blue beads are there?

14. Some string 2,305 in. long was cut into two unequal pieces. One piece was 55 inches longer than the other. What is the length of the shorter piece in inches?

15. Write >, <, or = in each ◯

(a) $\frac{2}{3}$ ◯ $\frac{6}{15}$

(b) 1 ◯ $\frac{2}{7} + \frac{3}{7} + \frac{2}{7}$

(c) $\frac{11}{12}$ ◯ $\frac{9}{10}$

(d) $2 - \frac{2}{5}$ ◯ $\frac{18}{5}$

16. Express each of the following as a mixed number.

(a) $\frac{17}{4}$

(b) $3 - \frac{11}{7}$

17. Express each of the following as an improper fraction.

(a) $4\frac{3}{5}$

(b) $2\frac{2}{3} + 1$

416

Divide.

1.	80 ÷ 1 =	11.	1,200 ÷ 20 =
2.	80 ÷ 10 =	12.	330 ÷ 110 =
3.	800 ÷ 10 =	13.	693 ÷ 11 =
4.	9,600 ÷ 12 =	14.	6,300 ÷ 10 =
5.	880 ÷ 110 =	15.	756 ÷ 12 =
6.	8,000 ÷ 100 =	16.	700 ÷ 10 =
7.	8,400 ÷ 10 =	17.	20 ÷ 10 =
8.	840 ÷ 10 =	18.	720 ÷ 10 =
9.	16,800 ÷ 20 =	19.	720 ÷ 20 =
10.	8,400 ÷ 100 =	20.	720 ÷ 72 =

18. Give each answer as a mixed number or a fraction in simplest form.

(a) $\frac{3}{8}+\frac{2}{8}=$

(b) $\frac{5}{6}+\frac{5}{6}=$

(c) $\frac{7}{8}-\frac{3}{8}=$

(b) $1\frac{3}{5}+4\frac{4}{5}=$

(e) $5\frac{1}{4}-2\frac{3}{4}=$

(f) $\frac{3}{4}+\frac{5}{8}=$

(g) $\frac{5}{12}-\frac{1}{3}=$

(h) $3\frac{1}{2}+2\frac{5}{6}=$

(i) $6 \div 8 =$

(j) $33 \div 6 =$

(k) $\frac{1}{2} \times 8 =$

(l) $\frac{1}{4} \times 6 =$

(m) $\frac{2}{3} \times 18 =$

(n) $5 \times \frac{3}{8} =$

19. Tom read $\frac{1}{5}$ of a book on Monday and $\frac{2}{5}$ of it on Tuesday. What fraction of the book does he have left to read?

20. In a group of 30 children, 12 are boys. Express the number of girls as a fraction of the children in the group.

427

Write in decimal form.

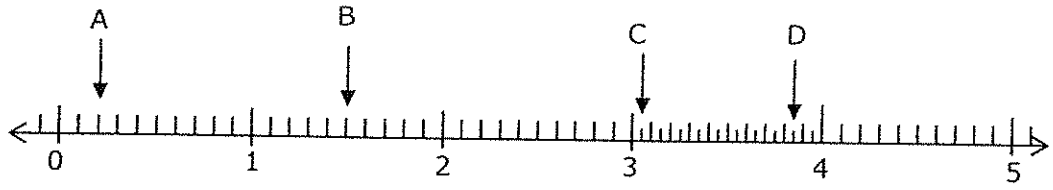
1.	$\frac{2}{10} =$	16.	$2\frac{95}{100} =$
2.	$\frac{4}{10} =$	17.	$3\frac{5}{100} =$
3.	$\frac{6}{10} =$	18.	$3\frac{7}{10} =$
4.	$\frac{7}{10} =$	19.	$3\frac{38}{100} =$
5.	$\frac{35}{100} =$	20.	$4\frac{5}{10} =$
6.	$\frac{50}{100} =$	21.	$4\frac{15}{100} =$
7.	$\frac{88}{100} =$	22.	$4\frac{85}{100} =$
8.	$\frac{2}{100} =$	23.	$5\frac{1}{10} =$
9.	$\frac{5}{100} =$	24.	$5\frac{4}{10} =$
10.	$1\frac{3}{10} =$	25.	$5\frac{7}{100} =$
11.	$2\frac{4}{10} =$	26.	$5\frac{75}{100} =$
12.	$1\frac{21}{100} =$	27.	$6\frac{1}{10} =$
13.	$1\frac{15}{100} =$	28.	$6\frac{10}{100} =$
14.	$2\frac{3}{100} =$	29.	$6\frac{26}{100} =$
15.	$2\frac{38}{100} =$	30.	$7\frac{100}{100} =$

21. $\frac{2}{5}$ of the children in a club are girls. 24 of them are boys. How many more boys than girls are there?

22. Mary had some cookies. She gave $\frac{2}{9}$ of them to Matthew and ate $\frac{1}{3}$ of them. She had 8 cookies left. How many did she have at first?

Part 2

1. Write the whole or decimal number that each letter represents.



A: _____ B: _____ C: _____ D: _____

2. Express each of the following as a decimal number.

(a) $\frac{16}{10}$ (b) $4+\frac{8}{100}$

(c) $5+\frac{6}{10}+\frac{4}{1,000}$ (d) $\frac{104}{1,000}$

(e) $3\frac{3}{4}$ (f) $\frac{4}{25}$

3. Arrange in increasing order.

(a) 4.04 0.4 4.4 0.004

(b) $\frac{5}{8}$ 0.602 $\frac{3}{5}$ 0.66

423

Find the value.

1.	$\frac{1}{2}$ of 6 =	13.	$\frac{1}{10}$ of 50 =
2.	$\frac{1}{2}$ of 12 =	14.	$\frac{1}{5}$ of 50 =
3.	$\frac{1}{3}$ of 9 =	15.	$\frac{2}{5}$ of 50 =
4.	$\frac{2}{3}$ of 9 =	16.	$\frac{4}{5}$ of 50 =
5.	$\frac{1}{4}$ of 12 =	17.	$\frac{1}{4}$ of 100 =
6.	$\frac{3}{4}$ of 12 =	18.	$\frac{3}{4}$ of 100 =
7.	$\frac{1}{3}$ of 9 =	19.	$\frac{1}{3}$ of 30 =
8.	$\frac{1}{3}$ of 18 =	20.	$\frac{2}{3}$ of 30 =
9.	$\frac{1}{8}$ of 24 =	21.	$\frac{3}{10}$ of 30 =
10.	$\frac{3}{8}$ of 24 =	22.	$\frac{9}{10}$ of 30 =
11.	$\frac{5}{8}$ of 24 =	23.	$\frac{1}{8}$ of 3 =
12.	$\frac{7}{8}$ of 24 =	24.	$\frac{1}{5}$ of 4 =

4. Express each decimal number as a fraction or mixed number in its simplest form.

(a) 0.6

(b) 4.12

(c) 0.408

(d) 6.002

5. Solve.

(a) 26.45 + 29.73

(b) 4.83 + 0.6

(c) 2.3 - 0.37

(d) 40 - 0.08

(e) 23.73 x 7

(f) 4 x 49.08

6. Give the answer correct to 1 decimal place.

(a) 42.3 ÷ 3

(b) 68 ÷ 7

(c) 68.31 ÷ 8

(d) 174.5 ÷ 6

(e) 45 ÷ 4

(f) 230 ÷ 7

424 Add or subtract.

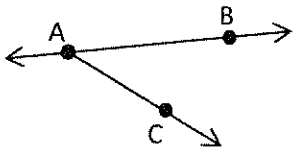
1.	$10 - 6 =$	16.	$2.7 + 1.3 =$
2.	$1 - 0.6 =$	17.	$6.1 - 1.9 =$
3.	$1 - 0.96 =$	18.	$3.6 + 5 =$
4.	$1.5 + 0.7 =$	19.	$3.6 + 5.5 =$
5.	$0.05 + 0.17 =$	20.	$12.03 - 1.53 =$
6.	$3 - 0.98 =$	21.	$0.63 + 0.7 =$
7.	$2.1 - 1.2 =$	22.	$1.1 - 0.53 =$
8.	$0.8 + 0.3 + 0.2 =$	23.	$0.36 + 0.24 =$
9.	$2.1 - 0.8 =$	24.	$2.36 + 0.24 =$
10.	$1 - 0.87 =$	25.	$21.2 + 2.39 =$
11.	$0.35 + 0.85 =$	26.	$30 - 4.82 =$
12.	$4.1 - 1.6 =$	27.	$33.09 - 1.82 =$
13.	$5.3 - 2.4 =$	28.	$29.03 + 3.7 =$
14.	$2.2 + 0.8 =$	29.	$39.01 - 6.94 =$
15.	$6.1 - 2.2 =$	30.	$30.99 + 9.99 =$

7. Jasmine saved $31.85. Her brother saved $19.65 less than she did. How much money did both of them save?

8. A painter mixed 12.5 quarts of white paint with 16.7 quarts of green paint. He poured the mixture equally into 4 cans. He used one can to paint a wall. How many quarts of paint does he have left?

9. 0.3 of all the apples a grocer had were sold. If he had 49 apples left, how many apples did he have at first?

10. Name one of the following geometric constructions in the drawing, using only the labeled points.



Angle: _____

Ray: _____

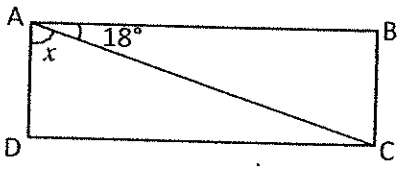
Line: _____

Line segment: _____

11. A $\frac{3}{4}$ turn is _____ right angles and is _____ degrees.

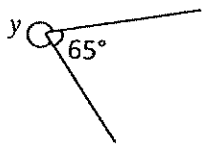
12. Find the measure of the marked unknown angle.

(a) ABCD is a rectangle



$m\angle x =$ _____

(b)

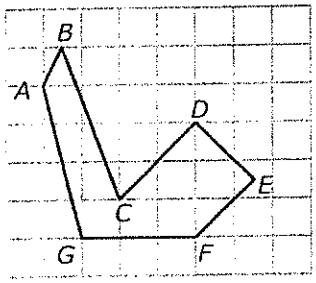


$m\angle y =$ _____

428

Divide.

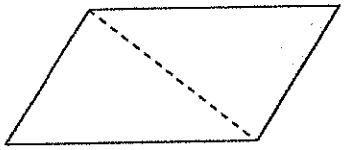
1.	$8 \div 2 =$	13.	$0.6 \div 2 =$
2.	$0.8 \div 2 =$	14.	$0.64 \div 2 =$
3.	$0.08 \div 2 =$	15.	$6.4 \div 2 =$
4.	$0.08 \div 4 =$	16.	$0.64 \div 4 =$
5.	$15 \div 3 =$	17.	$0.64 \div 8 =$
6.	$1.5 \div 3 =$	18.	$32 \div 4 =$
7.	$0.15 \div 3 =$	19.	$0.32 \div 4 =$
8.	$0.15 \div 5 =$	20.	$0.32 \div 8 =$
9.	$36 \div 4 =$	21.	$0.32 \div 2 =$
10.	$3.6 \div 4 =$	22.	$3.12 \div 3 =$
11.	$0.36 \div 4 =$	23.	$4.26 \div 6 =$
12.	$0.36 \div 9 =$	24.	$8.48 \div 8 =$

13. 

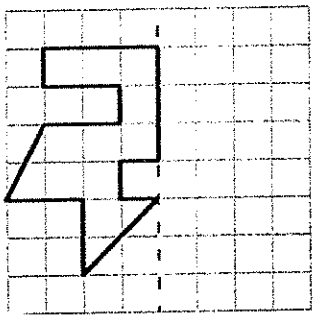
(a) Name a pair of parallel lines.

(b) Name a pair of perpendicular lines.

14. The figure at the right is a parallelogram. Is the dashed line a line of symmetry?



15. Complete the symmetric figure with the dotted line as the line of symmetry.



16. Which of the following shapes must also always be a parallelogram? Circle them.

Square	Quadrilateral
Trapezoid	Rhombus
Rectangle	Polygon

17. Which of the following types of triangles have line symmetry?

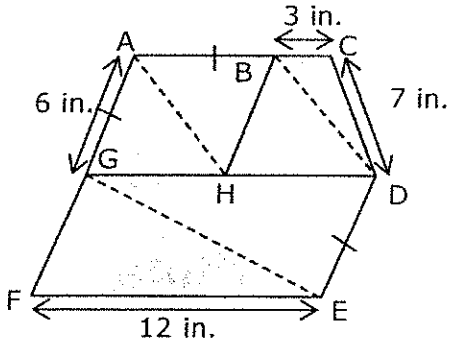
Scalene	Isosceles	Equilateral

411

Divide.

1.	4 ÷ 2 =	16.	100 ÷ 50 =
2.	6 ÷ 2 =	17.	76 ÷ 19 =
3.	120 ÷ 20 =	18.	200 ÷ 25 =
4.	240 ÷ 20 =	19.	384 ÷ 32 =
5.	90 ÷ 30 =	20.	203 ÷ 29 =
6.	150 ÷ 30 =	21.	450 ÷ 50 =
7.	210 ÷ 30 =	22.	300 ÷ 30 =
8.	240 ÷ 30 =	23.	400 ÷ 40 =
9.	270 ÷ 30 =	24.	500 ÷ 50 =
10.	330 ÷ 30 =	25.	330 ÷ 30 =
11.	120 ÷ 40 =	26.	360 ÷ 30 =
12.	200 ÷ 40 =	27.	390 ÷ 30 =
13.	320 ÷ 40 =	28.	400 ÷ 40 =
14.	360 ÷ 40 =	29.	480 ÷ 40 =
15.	440 ÷ 40 =	30.	520 ÷ 40 =

18. This figure ACDEF is a pentagon and is made up of the three quadrilaterals, ABHG, BCDH, and GDEF. One is a trapezoid but not a parallelogram, and two are parallelograms. GA = AB = DE = 6 in., BC = 3 in., CD = 7 in., EF = 12 in.



(a) Quadrilateral GDEF has _____ right angles, _____ obtuse angles, and _____ acute angles.

(b) Which quadrilateral is a trapezoid but not a parallelogram?

_____

(c) Which quadrilateral is a rhombus? _____.

(d) Lines are drawn from A to H, from G to E, and from B to D, forming triangles. If GE = 14 in, what is the perimeter of triangle GFE?

_____ in.

(e) Which of the triangles are:

Scalene: _____

Isosceles: _____

Equilateral: _____

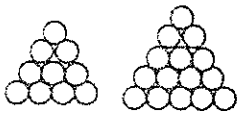
Have one obtuse angle: _____

(f) The perimeter of the figure ACDEF is _____ in.

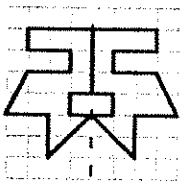
Multiply.

1.	6 x 3 =	11.	0.08 x 6 =
2.	0.6 x 3 =	12.	0.08 x 7 =
3.	0.06 x 3 =	13.	0.08 x 10 =
4.	3 x 6 =	14.	1.2 x 3 =
5.	0.3 x 6 =	15.	12 x 3 =
6.	0.03 x 6 =	16.	0.12 x 3 =
7.	7 x 4 =	17.	11 x 6 =
8.	0.7 x 4 =	18.	1.1 x 6 =
9.	0.07 x 4 =	19.	11.3 x 6 =
10.	0.08 x 3 =	20.	11.7 x 6 =

Answer Key Part 1

1. (a) nine hundred fifty-one thousand, seventy-six
   (b) 5
   (c) 1,006
   (d) 961,076
   (e) 950,976
   (f) 1,000,000
   (g) 951,067
2. (a) 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60
   (b) 2, 3, 5
3. 1, 3
4. 18, 36
5. (a) 
   (b) 10 15 21 28
   (c) Each term is the sum of the previous term and the difference between the two previous terms.
   Or
   Each number is the sum of the previous term and the number of its term.
6. (a) 157 (b) 1,456
   (c) 3,542 (d) 5,579
   (e) 4,257 (f) 400
7. (a) 77,000 (b) 9,000
   (c) 6,000 (d) 9
   (e) 32 (f) 20
   (g) 72 (h) 100
8. No
9. (a) 30,000 (b) 32,000
   29,556 32,232
10. (a) 400 (b) 300
    390 346 r4
11. (a) 20,000 (b) 160,000
    20,844 190,311
12. $7,885
13. 2,676 more red beads
14. 1,125 in.
15. (a) > (b) =
    (c) > (d) <
16. (a) $4\frac{1}{4}$ (b) $1\frac{3}{7}$
17. (a) $\frac{23}{5}$ (b) $\frac{11}{3}$
18. (a) $\frac{5}{8}$ (b) $1\frac{2}{3}$
    (c) $\frac{1}{2}$ (d) $6\frac{2}{5}$
    (e) $2\frac{1}{2}$ (f) $1\frac{3}{8}$
    (g) $\frac{1}{12}$ (h) $6\frac{1}{3}$
    (i) $\frac{3}{4}$ (j) $5\frac{1}{2}$
    (k) 4 (l) $1\frac{1}{2}$
    (m) 12 (m) $1\frac{7}{8}$
19. $\frac{2}{5}$
20. $\frac{3}{5}$
21. 8 more boys
22. 18

Answer Key Part 2

1. A: 0.2 B: 1.5 C: 3.05 D: 3.85
2. (a) 1.6 (b) 4.08
   (c) 5.604 (d) 0.104
   (e) 3.75 (f) 0.16
3. (a) 0.004 0.4 4.04 4.4
   (b) $\frac{3}{5}$ 0.602 $\frac{5}{8}$ 0.66
4. (a) $\frac{3}{5}$ (b) $4\frac{3}{25}$
   (c) $\frac{51}{125}$ (d) $6\frac{1}{500}$
5. (a) 56.18 (b) 5.43
   (c) 1.93 (d) 39.92
   (e) 166.11 (f) 196.32
6. (a) 14.1 (b) 9.7
   (c) 8.5 (d) 29.1
   (e) 11.3 (f) 32.9
7. $44.05
8. 21.9 quarts
9. 70
10. Angle: BAC or CAB
    Ray: AB or AC
    Line: AB or BA
    Line segment: Ab, BA, AC, or CA
11. 3; 270°
12. (a) 72°
    (b) 295°
13. (a) CD, EF
    (b) CD, DE
14. no
15. 
16. Square, Rhombus, Rectangle
17. Isosceles, Equilateral
18. Note: Students may have a different order of vertices in their answers.
    (a) 0, 2, 2
    (b) BCDH
    (c) ABHG
    (d) 32 in.
    (e) Scalene: BCD, GDE, GEF
    Isosceles: AHG, ABH, BDH
    Equilateral: none
    1 obtuse angle: BCD
    (f) 46

415 Answer Sheet

1.	60	16.	600
2.	100	17.	1,200
3.	160	18.	180
4.	80	19.	1,800
5.	100	20.	200
6.	180	21.	400
7.	190	22.	600
8.	200	23.	800
9.	400	24.	1,200
10.	140	25.	420
11.	280	26.	210
12.	420	27.	630
13.	560	28.	540
14.	280	29.	270
15.	2,800	30.	810

419 Answer Sheet

1.	$\frac{2}{3}$	16.	$\frac{5}{8}$
2.	$\frac{2}{5}$	17.	$\frac{1}{2}$
3.	$\frac{4}{5}$	18.	$\frac{2}{3}$
4.	$\frac{4}{7}$	19.	$\frac{1}{2}$
5.	$\frac{6}{7}$	20.	$\frac{3}{8}$
6.	$\frac{1}{4}$	21.	$\frac{7}{10}$
7.	$\frac{3}{8}$	22.	1
8.	$\frac{5}{8}$	23.	$\frac{4}{5}$
9.	$\frac{1}{3}$	24.	$\frac{3}{5}$
10.	$\frac{5}{9}$	25.	$\frac{1}{10}$
11.	$\frac{2}{3}$	26.	$\frac{2}{5}$
12.	$\frac{1}{3}$	27.	$\frac{1}{6}$
13.	$\frac{3}{4}$	28.	$\frac{5}{8}$
14.	$\frac{1}{3}$	29.	$\frac{1}{4}$
15.	$\frac{2}{3}$	30.	0

426 Answer Sheet

1.	$\frac{3}{10}$	16.	$2\frac{2}{5}$
2.	$\frac{1}{10}$	17.	$2\frac{9}{10}$
3.	$\frac{7}{10}$	18.	$2\frac{3}{5}$
4.	$\frac{2}{5}$	19.	$2\frac{77}{100}$
5.	$\frac{9}{10}$	20.	$3\frac{3}{5}$
6.	$1\frac{7}{10}$	21.	$3\frac{3}{4}$
7.	$\frac{1}{5}$	22.	$3\frac{1}{20}$
8.	$\frac{7}{100}$	23.	$3\frac{1}{10}$
9.	$\frac{1}{20}$	24.	$4\frac{1}{10}$
10.	$\frac{9}{100}$	25.	$4\frac{1}{100}$
11.	$1\frac{1}{2}$	26.	$4\frac{11}{100}$
12.	$1\frac{2}{5}$	27.	$4\frac{2}{25}$
13.	$1\frac{3}{4}$	28.	$4\frac{4}{5}$
14.	$2\frac{1}{5}$	29.	$4\frac{9}{10}$
15.	$2\frac{1}{25}$	30.	$4\frac{19}{20}$

416 Answer Sheet

1.	80	11.	60
2.	8	12.	3
3.	80	13.	63
4.	800	14.	630
5.	8	15.	63
6.	80	16.	70
7.	840	17.	2
8.	84	18.	72
9.	840	19.	36
10.	84	20.	10

427 Answer Sheet

1.	0.2	16.	2.95
2.	0.4	17.	3.05
3.	0.6	18.	3.7
4.	0.7	19.	3.38
5.	0.35	20.	4.5
6.	0.5	21.	4.15
7	0.88	22.	4.85
8.	0.02	23.	5.1
9.	0.05	24.	5.4
10.	1.3	25.	5.07
11.	2.4	26.	5.75
12.	1.21	27.	6.1
13.	1.15	28.	6.1
14.	2.03	29.	6.26
15.	2.38	30.	8

52

423 Answer Sheet

1.	3	13.	5
2.	6	14.	10
3.	3	15.	20
4.	6	16.	40
5.	3	17.	25
6.	9	18.	75
7.	3	19.	10
8.	6	20.	20
9.	3	21	9
10.	9	22.	27
11.	15	23.	$\frac{3}{8}$
12.	21	24.	$\frac{4}{5}$

424 Answer Sheet

1.	4	16.	4
2.	0.4	17.	4.2
3.	0.04	18.	8.6
4.	2.2	19.	9.1
5.	0.22	20.	10.5
6.	2.02	21.	1.33
7.	0.9	22.	0.57
8.	1.3	23.	0.6
9.	1.3	24.	2.6
10.	0.13	25.	23.59
11.	1.2	26.	25.18
12.	2.5	27.	31.27
13.	2.9	28.	32.73
14.	3	29.	32.07
15.	3.9	30.	40.98

428

1.	4	13.	0.3
2.	0.4	14.	0.32
3.	0.04	15	3.2
4.	0.02	16.	0.16
5.	5	17.	0.08
6.	0.5	18.	8
7.	0.05	19.	0.08
8.	0.03	20.	0.04
9.	9	21.	0.16
10.	0.9	22.	1.04
11.	0.09	23.	0.71
12.	0.04	24.	1.06

411 Answer Sheet

1.	2	16.	2
2.	3	17.	4
3.	6	18.	8
4.	12	19.	12
5.	3	20.	7
6.	5	21.	9
7.	7	22.	10
8.	8	23.	10
9.	9	24.	10
10.	11	25.	11
11.	3	26.	12
12.	5	27.	13
13.	8	28.	10
14.	9	29.	12
15.	11	30.	13

429 Answer Sheet

1.	18	11.	0.48
2.	1.8	12.	0.56
3.	0.18	13.	0.8
4.	18	14.	3.6
5.	1.8	15.	36
6.	0.18	16.	0.36
7.	28	17.	66
8.	2.8	18.	6.6
9.	0.28	19.	67.8
10.	0.24	20.	70.2