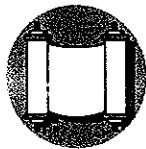
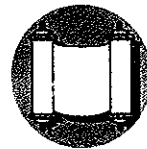


Summer Math Packet

Children Entering Grade 6



Hebrew Academy of Long Beach



June 2011

Dear Parents,

In order to succeed at mastering a skill, a person must practice. For example, both musicians and athletes practice on a regular basis. The same is true for a student. Although students need and deserve some “down time,” a great deal of information can be forgotten during the summer.

By fostering a positive approach to the completion of this math packet, you will help your child learn and retain important math skills and concepts. Your cooperation in assuring that the summer work is completed will contribute to your child’s future success in school.

This year’s summer math program consists of a packet of materials. This packet was created to align with the math curriculum taught during the school year. The packet provides additional practice in math during the summer. There are between 15 and 20 key topics that will be addressed in the packet. The problems are set up to review, maintain and deepen the skills and concepts learned this year. Each student is **required** to complete the green pages in the packet. These pages are meant to assess each student’s ability to apply the concepts that have been learned. When a child has difficulty with a concept while working on a green page, he/she can refer to the blue pages that correspond to the topic in question. The blue pages can also serve as additional review if you feel that your child would benefit from it. They are **not required**. The gold pages will serve as enrichment for the students who seek a challenge throughout the summer. Finally, the pink pages are basic-fact sheets. Many of our students have difficulty remembering number facts, especially in multiplication. As a result, other topics that relate to multiplication become problematic for them. You may want to use these sheets as mental math reviews or set a timer and have your child work to correctly solve as many problems as he/she can within 3 minutes. We would also like to recommend **Timez Attack**, a highly motivational computer game for multiplication and division facts. The free downloadable version of this game can be found at www.bigbrainz.com.

Thank you for your support. We are looking forward to an exciting and enriching year with your child. Enjoy the summer!

Sincerely,



Angela Monda and Gail Rusgo
Directors of General Studies

REQUIRED MATH WORK
GREEN PAGES

Name _____

Practice

1-2

Comparing and Ordering Whole Numbers

Complete. Compare the numbers. Use $<$ or $>$ for each .

1. $23,412$ $23,098$

2. $9,000,000$ $9,421,090$

Order these numbers from least to greatest.

3. $7,545,999$ $7,445,999$ $7,554,000$

4. **Number Sense** What digit could be in the ten millions place of a number that is less than $55,000,000$ but greater than $25,000,000$? _____

5. Put the trenches in order from the least depth to the greatest depth.

Depths of Major Ocean Trenches

Trench	Depth (in feet)
Philippine Trench	32,995
Mariana Trench	35,840
Kermadec Trench	32,963
Tonga Trench	35,433

6. These numbers are ordered from greatest to least. Which number could be placed in the second position?

$2,643,022$ $1,764,322$ $927,322$

A $2,743,022$ **B** $1,927,304$ **C** $1,443,322$ **D** $964,322$

7. **Explain It** Explain why $42,678$ is greater than $42,067$.

Practice 1-2

Name _____

Practice

1-4

Comparing and Ordering Decimals

Write $>$, $<$, or $=$ for each \bigcirc .

1. $5.424 \bigcirc 5.343$

2. $0.33 \bigcirc 0.330$

3. $9.489 \bigcirc 9.479$

4. $21.012 \bigcirc 21.01$

5. $223.21 \bigcirc 223.199$

6. $5.43 \bigcirc 5.432$

Order these numbers from least to greatest.

7. 8.37, 8.3, 8.219, 8.129 _____

8. 0.012, 0.100, 0.001, 0.101 _____

9. **Number Sense** Name three numbers between 0.33 and 0.34.

10. Which runner came in first place?

11. Who ran faster, Amanda or Steve?

12. Who ran for the longest time?

Half-Mile Run

Runner	Time (minutes)
Amanda	8.016
Calvin	7.049
Liz	7.03
Steve	8.16

13. Which number is less than 28.43?

A 28.435

B 28.34

C 28.430

D 29.43

14. **Explain It** Explain why it is not reasonable to say that 4.23 is less than 4.13.

Practice 1-4

Name _____

Practice

2-2

Rounding Whole Numbers and Decimals

Round each number to the place of the underlined digit.

1. 32.60 _____

2. 489,334,209 _____

3. 324,650 _____

4. 32.073 _____

5. **Reasoning** Name two different numbers that round to 30 when rounded to the nearest ten.

In 2000, Italy produced 7,464,000 tons of wheat, and Pakistan produced 21,079,000 tons of wheat. Round each country's wheat production in tons to the nearest hundred thousand.

6. Italy _____

7. Pakistan _____

The price of wheat in 1997 was \$3.38 per bushel. In 1998, the price was \$2.65 per bushel. Round the price per bushel of wheat for each year to the nearest tenth of a dollar.

8. 1997 _____

9. 1998 _____

10. **Number Sense** Which number rounds to 15,700,000 when rounded to the nearest hundred thousand?

A 15,000,000 **B** 15,579,999 **C** 15,649,999 **D** 15,659,999

11. **Explain It** Write a definition of rounding in your own words.

Practice 2-2

Name _____

Problem Solving: Draw a Picture and Write an Equation

Write two different equations; then solve each problem.

1. Dayana picked apples for 2 hours. She picked 28 apples in the first hour, and at the end of two hours, she had 49. How many apples did she pick during the second hour? _____
2. Dixon bought a pack of pencils and then gave 12 away. He now has 24 left. How many pencils were in the pack of pencils that Dixon bought? _____

Copy and complete the picture. Then write an equation and solve.

3. Rumina is baking 25 muffins for the bake sale. She has already baked 12. How many more does she need to bake?

25 muffins in all	
12	n

4. **Estimation** Janet saved 22 dollars one month and 39 dollars the next month. She wants to buy a bicycle that costs \$100. About how much more money does she need?

A about \$40 **B** about \$50 **C** about \$60 **D** about \$70

5. **Explain It** Stefany ran 2 miles each day for 14 days. How many miles did she run in 14 days? Explain two different ways to solve this problem, and then solve.

Name _____

Practice

2-6

Adding Decimals

Add.

1.
$$\begin{array}{r} 58.0 \\ + 3.6 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 40.5 \\ + 22.3 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 34.587 \\ + 21.098 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 43.1000 \\ + 8.4388 \\ \hline \end{array}$$

5. $16.036 + 7.009 =$ _____ 6. $92.30 + 0.32 =$ _____

7. **Number Sense** Reilly adds 45.3 and 3.21. Should his sum be greater than or less than 48? Tell how you know.

In science class, students weighed different amounts of tin. Carmen weighed 4.361 g, Kim weighed 2.704 g, Simon weighed 5.295 g, and Angelica weighed 8.537 g.

8. How many grams of tin did Carmen and Angelica have combined?

9. How many grams of tin did Kim and Simon have combined?

10. In December the snowfall was 0.03 in. and in January it was 2.1 in. Which was the total snowfall?

A 3.2 in. B 2.40 in. C 2.13 in. D 0.03 in.

11. **Explain It** Explain why it is important to line up decimal numbers by their place value when you add or subtract them.

Name _____

Practice

2-7

Subtracting Decimals

Subtract.

1.
$$\begin{array}{r} 92.1 \\ - 32.6 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 52.7 \\ - 36.9 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 85.76 \\ - 12.986 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 32.7 \\ - 2.328 \\ \hline \end{array}$$

5. $8.7 - 0.3 =$ _____

6. $23.3 - 1.32 =$ _____

7. **Number Sense** Kelly subtracted 2.3 from 20 and got 17.7. Explain why this answer is reasonable.

At a local swim meet, the second-place swimmer of the 100-m freestyle had a time of 9.33 sec. The first-place swimmer's time was 1.32 sec faster than the second-place swimmer. The third-place time was 13.65 sec.

8. What was the time for the first-place swimmer? _____

9. What was the difference in time between the second- and third-place swimmers? _____

10. Miami's annual precipitation in 2000 was 61.05 in. Albany's was 46.92 in. How much greater was Miami's precipitation than Albany's?

A 107.97 in. **B** 54.31 in. **C** 14.93 in. **D** 14.13 in.

11. **Explain It** Explain how to subtract 7.6 from 20.39.

Name _____

Practice

2-8

Problem Solving: Multiple-Step Problems

Solve.

1. Theater tickets for children cost \$5. Adult tickets cost \$3 more. If 2 adults and 2 children buy theater tickets, what is the total cost?
- _____

2. Luis has a \$10 bill and three \$5 bills. He spends \$12.75 on the entrance fee to an amusement park and \$8.50 on snacks. How much money does he have left?
- _____

3. **Number Sense** Alexandra earns \$125 from her paper route each month, but she spends about \$20 each month on personal expenses. To pay for a school trip that costs \$800, about how many months does she need to save money? Explain.
- _____
- _____

4. **Critical Thinking** Patty is a member of the environmental club. Each weekday, she volunteers for 2 hours. On Saturday and Sunday, she volunteers 3 hours more each day. Which expression shows how to find the number of hours she volunteers in one week?

A $2 + 5$

B $2 + 2 + 2 + 2 + 2 + 5 + 5$

C $2 + 2 + 2 + 3 + 3$

D $2 + 3 + 3$

5. **Explain It** Marco's goal is to eat only 2,000 calories each day. One day for breakfast he consumed 310 calories, for lunch he consumed 200 more calories than breakfast, and for dinner he consumed 800. Did he make his goal? Explain.
- _____

Name _____

Practice

3-5

Multiplying 2-Digit by 2-Digit Numbers

Find each product. Estimate to check that your answer is reasonable.

1.
$$\begin{array}{r} 56 \\ \times 34 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 45 \\ \times 76 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 35 \\ \times 15 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 47 \\ \times 94 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 64 \\ \times 51 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 47 \\ \times 30 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 56 \\ \times 19 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 92 \\ \times 49 \\ \hline \end{array}$$

9. To pay for a sofa, Maddie made a payment of 64 dollars each month for one year. How much did the sofa cost? _____
10. **Geometry** To find the volume of a box, you multiply the length times the width times the height. What is the volume, in cubic feet, of a box that is 3 ft long, 8 ft wide, and 16 ft high? _____
11. **Estimation** Katie is in charge of buying juice for the teachers' breakfast party. If one teacher will drink between 18 and 22 ounces of juice, and there are 32 teachers, which is the best estimate for the amount of juice Katie should buy?
- A about 200 ounces
 - B about 400 ounces
 - C about 600 ounces
 - D about 800 ounces
12. **Explain It** Is 7,849 a reasonable answer for 49×49 ? Why or why not?
- _____
- _____
- _____

Practice 3-5

Name _____

Practice

4-6

Zeros in the Quotient

Find each quotient. Check your answers by multiplying.

1. $490 \div 7 =$ _____ 2. $326 \div 3 =$ _____

3. $916 \div 3 =$ _____ 4. $720 \div 2 =$ _____

5. $2 \overline{)941}$

6. $9 \overline{)982}$

7. $7 \overline{)740}$

8. $5 \overline{)703}$

9. If there are 505 seats in an auditorium divided equally into 5 sections, how many seats are in each section? _____

10. A book company publishes 749 copies of a novel and distributes them to 7 bookstores. If each bookstore were to receive the same number of copies, how many copies would be sent to each store? _____

11. In one year, Dolores and Tom's four children saved \$420 by recycling cans. When they divided the money equally, how much money did each child receive?

A \$50

B \$100

C \$105

D \$1,500

12. **Explain It** Explain why estimating before you divide $624 \div 6$ helps you place the first digit in the quotient.

Practice 4-6

Name _____

Practice

4-7

Understanding Factors

List all the factors of each number.

1. 36 _____
2. 90 _____
3. 84 _____

Number Sense A number is divisible by 4 if the last two digits are divisible by 4. Write yes on the line if the number is divisible by 4 and no if it is not.

4. 324 _____ 5. 634 _____ 6. 172 _____

7. A class of 80 students is graduating from elementary school. The teachers need help figuring out how to line up the students for the ceremony. One row of 80 students would be too long. What other ways could the students be arranged for the ceremony?

8. A number is divisible by another number when the _____ after division by that number is 0.

9. **Number Sense** What factor pair is missing for 45 if you already know 1 and 45, 5 and 9?

A 7 and 6 B 8 and 6 C 3 and 15 D. 4 and 12

10. **Explain It** Explain how to find all the factor pairs of 40.

Name _____

Practice

5-6

2-Digit Quotients

In 1 through 6, find each quotient.

1. $14 \overline{)413}$ _____

2. $29 \overline{)634}$ _____

3. $35 \overline{)768}$ _____

4. $19 \overline{)401}$ _____

5. $45 \overline{)942}$ _____

6. $26 \overline{)503}$ _____

7. **Reasoning** The school student council sponsored a Switch Day where students were able to switch classes every 20 minutes. The students are in school for 7 hours. If a student switched as often as possible, how many times did that student get to visit another classroom? (Hint: There are 60 minutes in 1 hour.)
- _____

8. 456 students participated in Switch Day. The students raised money for charity so that the principal would approve of the day. If the total amount of money raised was \$912, and each student brought in the same amount of money, how much did each student raise?
- _____

9. **Estimation** The total dinner bill at a buffet came out to \$589 for 31 people. About how much was the buffet cost per person?

A \$15.00

B \$20.00

C \$22.00

D \$25.00

10. **Explain It** If you have a two-digit divisor and a three-digit dividend, does the quotient always have the same number of digits?
- _____
- _____

Practice 5-6

Name _____

Practice
6-1

Variables and Expressions

For questions 1 through 4, use a variable to write an algebraic expression that represents the word phrase.

1. a number of apples divided into 12 baskets _____
2. 5 more than s _____
3. three times the cost for one hat _____
4. nine fewer than the total number of people _____

For 5 through 7, translate each algebraic expression into words.

5. $3 + w$ _____
6. $8x$ _____
7. $40 - p$ _____
8. Write two different word phrases for the expression $\frac{t}{30}$.

9. **Number Sense** Do $5 + x$ and $x + 5$ represent the same expression? Explain.

10. **Algebra** Dan is 12 in. taller than Jay. Use x for Jay's height. Which expression shows Dan's height?

A $x + 12$

B $x - 12$

C $12x$

D $\frac{x}{12}$

11. **Explain It** Explain what the expression $6x$ means.

Name _____

Practice

7-4

Multiplying Two Decimals

Find each product.

1.
$$\begin{array}{r} 3.7 \\ \times 0.3 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 4.4 \\ \times 0.2 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 0.61 \\ \times 6.8 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 1.9 \\ \times 0.005 \\ \hline \end{array}$$

5. $0.79 \times 4.3 =$ _____

6. $0.79 \times 0.005 =$ _____

7. **Number Sense** The product of 4.7 and 6.5 equals 30.55. What is the product of 4.7 and 0.65? 4.7 and 65?

8. What would be the gravity in relation to Earth of a planet with 3.4 times the gravity of Mercury?

9. The gravity of Venus is 0.35 times that of Jupiter. What is the gravity of Venus in relation to Earth's gravity?

Relative (to Earth) Surface Gravity

Planet	Gravity
Mercury	0.39
Neptune	1.22
Jupiter	2.6

10. How many decimal places are in the product of a number with decimal places to the thousandths multiplied by a number with decimal places to the hundredths?

A 2

B 3

C 4

D 5

11. **Explain It** Explain how you know the number of decimal places that should be in the product when you multiply two decimal numbers together.

Practice 7-4

Name _____

Practice

7-8

Dividing a Decimal by a Decimal

Find each quotient.

1. $0.8 \overline{)1.84}$

2. $0.9 \overline{)2.7}$

3. $2.5 \overline{)4.75}$

4. $1.1 \overline{)1.21}$

5. $7.1 \overline{)6.39}$

6. $0.8 \overline{)0.648}$

7. $1.3 \overline{)10.725}$

8. $0.2 \overline{)0.51}$

9. $0.07 \overline{)0.77}$

10. $4.8 \overline{)4.32}$

11. $0.7 \overline{)8.4}$

12. $2.3 \overline{)6.9}$

13. Chan paid \$4.75 for trail mix that costs \$2.50 a pound. How many pounds of trail mix did he buy?

14. Max's family car has a gas tank that holds 12.5 gallons of gas. It cost \$40.62 to completely fill the tank yesterday. What was the price of gas per gallon?

15. **Strategy Practice** Strawberries cost \$5.99 per pound, and bananas cost \$0.59 per pound. How many pounds of bananas could you buy for the cost of one pound of strawberries?

A 101.5 pounds B 10.15 pounds C 5.99 pounds D .59 pounds

16. **Explain It** When dividing a decimal by a decimal, why is it sometimes necessary to add a zero to the right of the decimal point in the quotient?

Name _____

Practice

9-4

Equivalent Fractions

Name two equivalent fractions for each fraction.

1. $\frac{5}{15}$

2. $\frac{6}{36}$

3. $\frac{2}{12}$

4. $\frac{4}{28}$

5. $\frac{3}{21}$

6. $\frac{2}{11}$

Find the missing number to make the fractions equivalent.

7. $\frac{4}{13} = \frac{8}{x}$ _____

8. $\frac{12}{30} = \frac{n}{90}$ _____

9. $\frac{q}{54} = \frac{2}{9}$ _____

10. $\frac{14}{h} = \frac{7}{20}$ _____

11. Renie gave each of six people $\frac{1}{10}$ of a veggie pizza. Renie has $\frac{2}{5}$ of the pizza left. Explain how this is true.

12. Which fraction is equivalent to $\frac{3}{7}$?

A $\frac{3}{6}$

B $\frac{6}{14}$

C $\frac{3}{17}$

D $\frac{7}{7}$

13. **Explain It** Jacqueline had four \$5 bills. She bought a shirt for \$10. Explain what fraction of her money Jacqueline has left. Use equivalent fractions.

Name _____

Practice

9-5

Comparing and Ordering Fractions and Mixed Numbers

Compare the numbers. Write $>$, $<$, or $=$ for each \bigcirc .

1. $\frac{6}{7} \bigcirc \frac{6}{8}$

2. $\frac{4}{9} \bigcirc \frac{2}{3}$

3. $1\frac{1}{10} \bigcirc 1\frac{1}{12}$

4. $2\frac{4}{5} \bigcirc 2\frac{5}{6}$

5. $3\frac{6}{9} \bigcirc 3\frac{2}{3}$

6. $\frac{2}{5} \bigcirc \frac{2}{8}$

Order the numbers from least to greatest.

7. $\frac{4}{6}, \frac{4}{8}, \frac{3}{4}, \frac{5}{8}$ _____

8. $4\frac{1}{4}, 4\frac{1}{8}, 5\frac{10}{11}, 4\frac{2}{12}$ _____

9. $1\frac{3}{7}, 1\frac{3}{4}, 1\frac{2}{4}, 1\frac{8}{14}$ _____

10. **Number Sense** How do you know that $5\frac{1}{4}$ is less than $5\frac{4}{10}$?

11. A mechanic uses four wrenches to fix Mrs. Aaron's car. The wrenches are different sizes: $\frac{5}{16}$ in., $\frac{1}{2}$ in., $\frac{1}{4}$ in., and $\frac{7}{16}$ in. Order the sizes of the wrenches from greatest to least.

12. Which is greater than $6\frac{1}{3}$?

A $6\frac{1}{6}$

B $6\frac{1}{5}$

C $6\frac{1}{4}$

D $6\frac{1}{2}$

13. **Explain It** Compare $3\frac{3}{22}$ and $3\frac{2}{33}$. Which is greater? How do you know?

Name _____

Practice

9-7

Fractions in Simplest Form

Write each fraction in simplest form.

1. $\frac{5}{10}$ _____

2. $\frac{6}{24}$ _____

3. $\frac{9}{27}$ _____

4. $\frac{3}{15}$ _____

5. $\frac{10}{12}$ _____

6. $\frac{9}{15}$ _____

7. $\frac{2}{18}$ _____

8. $\frac{25}{60}$ _____

9. $\frac{12}{72}$ _____

10. **Number Sense** Explain how you can tell $\frac{4}{5}$ is in simplest form.

Write in simplest form.

11. What fraction of the problems on the math test will be word problems?

Math Test

- ➔ 20 Multiple-choice problems
- ➔ 10 Fill in the blanks
- ➔ 5 Word problems

12. What fraction of the problems on the math test will be multiple-choice problems?

13. Which is the simplest form of $\frac{10}{82}$?

A $\frac{1}{8}$

B $\frac{1}{22}$

C $\frac{10}{82}$

D $\frac{5}{41}$

14. **Explain It** Explain how you can find the simplest form of $\frac{100}{1,000}$.

Name _____

Practice
9-9

Thousandths

Write each decimal as either a fraction or a mixed number.

- | | | | |
|----------|-------|----------|-------|
| 1. 0.007 | _____ | 2. 0.052 | _____ |
| 3. 0.038 | _____ | 4. 0.259 | _____ |
| 5. 3.020 | _____ | 6. 4.926 | _____ |

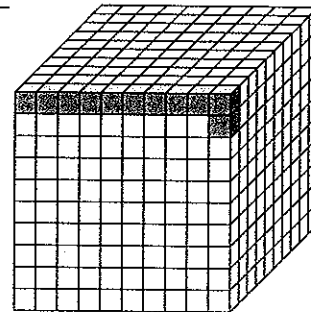
Write each fraction as a decimal.

- | | | | |
|------------------------|-------|-------------------------|-------|
| 7. $\frac{73}{1,000}$ | _____ | 8. $\frac{593}{1,000}$ | _____ |
| 9. $\frac{854}{1,000}$ | _____ | 10. $\frac{11}{1,000}$ | _____ |
| 11. $\frac{5}{1,000}$ | _____ | 12. $\frac{996}{1,000}$ | _____ |

Write the numbers in order from least to greatest.

13. $\frac{5}{1,000}$, 0.003, $\frac{9}{1,000}$ _____
14. 0.021, 0.845, $\frac{99}{1,000}$ _____

15. Look at the model at the right. Write a fraction and a decimal that the model represents.



16. **Reasoning** In Tasha's school, 0.600 of the students participate in a school sport. If there are one thousand students in Tasha's school, how many participate in a school sport?

- A** 6,000 **B** 600 **C** 60 **D** 6

17. **Explain It** Explain how knowing that $5 \div 8 = 0.625$ helps you write the decimal for $4\frac{5}{8}$.

Name _____

Practice

10-3

Adding Fractions with Unlike Denominators

Find each sum. Simplify if necessary.

1. $\frac{2}{9} + \frac{1}{3}$ _____

2. $\frac{1}{7} + \frac{3}{21}$ _____

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

4. $\frac{1}{4} + \frac{2}{3}$ _____

5. $\frac{1}{12} + \frac{4}{6}$ _____

6. $\frac{1}{2} + \frac{3}{5}$ _____

7. $\frac{1}{6} + \frac{5}{12}$ _____

8. $\frac{4}{6} + \frac{1}{3}$ _____

9. $\frac{2}{5} + \frac{1}{8}$ _____

10. $\frac{3}{4} + \frac{4}{5}$ _____

11. $\frac{11}{12} + \frac{1}{3}$ _____

12. $\frac{4}{8} + \frac{1}{2}$ _____

Jeremy collected nickels for one week. He is making stacks of his nickels to determine how many he has. The thickness of one nickel is $\frac{1}{16}$ in.

13. How tall is a stack of 16 nickels?

14. What is the combined height of 3 nickels, 2 nickels, and 1 nickel?

15. **Number Sense** Which fraction is greatest?

A $\frac{5}{6}$

B $\frac{7}{9}$

C $\frac{2}{3}$

D $\frac{9}{12}$

16. **Explain It** Which equivalent fraction would you have to use in order to add $\frac{3}{5}$ to $\frac{21}{25}$?

Practice 10-3

Name _____

Subtracting Fractions with Unlike Denominators

Find the difference. Simplify if necessary.

1. $\frac{10}{12} - \frac{1}{4}$ _____ 2. $\frac{9}{10} - \frac{3}{5}$ _____ 3. $\frac{7}{8} - \frac{2}{6}$ _____

4. $\frac{7}{12} - \frac{1}{4}$ _____ 5. $\frac{4}{5} - \frac{1}{3}$ _____ 6. $\frac{2}{3} - \frac{1}{6}$ _____

7. $\frac{4}{8} - \frac{1}{4}$ _____ 8. $\frac{4}{10} - \frac{1}{5}$ _____ 9. $\frac{7}{9} - \frac{2}{3}$ _____

10. $\frac{9}{15} - \frac{1}{3}$ _____ 11. $\frac{4}{12} - \frac{1}{6}$ _____ 12. $\frac{14}{20} - \frac{3}{5}$ _____

13. The pet shop owner told Jean to fill her new fish tank $\frac{3}{4}$ full with water. Jean filled it $\frac{9}{12}$ full. What fraction of the tank does Jean still need to fill?
- _____

14. Paul's dad made a turkey pot pie for dinner on Wednesday. The family ate $\frac{4}{8}$ of the pie. On Thursday after school, Paul ate $\frac{2}{16}$ of the pie for a snack. What fraction of the pie remained?
- _____

15. **Algebra** Gracie read 150 pages of a book she got for her birthday. The book is 227 pages long. Which equation shows how to find the amount she still needs to read to finish the story?

A $150 - n = 227$ C $n - 150 = 227$

B $227 + 150 = n$ D $n + 150 = 227$

16. **Explain It** Why do fractions need to have a common denominator before you add or subtract them?
- _____
- _____
- _____

Name _____

Practice

10-5

Adding Mixed Numbers

Estimate the sum first. Then add. Simplify if necessary.

1. $7\frac{2}{3} + 8\frac{5}{6}$ _____ 2. $4\frac{3}{4} + 2\frac{2}{5}$ _____
3. $11\frac{9}{10} + 3\frac{1}{20}$ _____ 4. $7\frac{6}{7} + 5\frac{2}{7}$ _____
5. $5\frac{8}{9} + 3\frac{1}{2}$ _____ 6. $21\frac{11}{12} + 17\frac{2}{3}$ _____

7. **Number Sense** Write two mixed numbers with a sum of 3.

8. What is the total measure of an average man's brain and heart in kilograms?

Vital Organ Measures

Average woman's brain	$1\frac{3}{10}$ kg	$2\frac{4}{5}$ lb
Average man's brain	$1\frac{2}{5}$ kg	3 lb
Average human heart	$\frac{3}{10}$ kg	$\frac{7}{10}$ lb

9. What is the total weight of an average woman's brain and heart in pounds? _____
10. What is the sum of the measures of an average man's brain and an average woman's brain in kilograms? _____
11. Which is a good comparison of the estimated sum and the actual sum of $7\frac{7}{8} + 2\frac{11}{12}$?
- A Estimated < actual C Actual > estimated
B Actual = estimated D Estimated > actual
12. **Explain It** Can the sum of two mixed numbers be equal to 2? Explain why or why not.

Name _____

Practice

10-6

Subtracting Mixed Numbers

Estimate the difference first. Then subtract. Simplify if necessary.

1. $10\frac{3}{4}$
 $- 7\frac{1}{4}$

2. $7\frac{3}{7}$
 $- 2\frac{8}{21}$

3. 3
 $- 2\frac{2}{3}$

4. $17\frac{7}{8}$
 $- 12\frac{3}{12}$

5. $9\frac{5}{9} - 6\frac{5}{6}$ _____

6. $4\frac{3}{4} - 2\frac{2}{3}$ _____

7. $6\frac{1}{4} - 3\frac{1}{3}$ _____

8. $5\frac{1}{5} - 3\frac{7}{8}$ _____

9. $8\frac{2}{7} - 7\frac{1}{3}$ _____

10. $2\frac{9}{10} - 2\frac{1}{3}$ _____

Strategy Practice The table shows the length and width of several kinds of bird eggs.

Egg Sizes

Bird	Length	Width
Canada goose	$3\frac{2}{5}$ in.	$2\frac{3}{10}$ in.
Robin	$\frac{3}{4}$ in.	$\frac{3}{5}$ in.
Turtledove	$1\frac{1}{5}$ in.	$\frac{9}{10}$ in.
Raven	$1\frac{9}{10}$ in.	$1\frac{3}{10}$ in.

11. How much longer is the Canada goose egg than the raven egg?

12. How much wider is the turtledove egg than the robin egg?

13. Which is the difference of $21\frac{15}{16} - 18\frac{3}{4}$?

A $2\frac{7}{16}$

B $2\frac{9}{16}$

C $3\frac{3}{16}$

D $3\frac{9}{16}$

14. **Explain It** Explain why it is necessary to rename $4\frac{1}{4}$ if you subtract $\frac{3}{4}$ from it.

Name _____

Practice

11-1

Multiplying Fractions and Whole Numbers

Find each product.

- | | | |
|--------------------------------------|--|---------------------------------------|
| 1. $\frac{1}{4}$ of 96 = _____ | 2. $\frac{4}{7}$ of 28 = _____ | 3. $\frac{3}{4} \times 72 =$ _____ |
| 4. $45 \times \frac{3}{9} =$ _____ | 5. $56 \times \frac{7}{8} =$ _____ | 6. $42 \times \frac{3}{7} =$ _____ |
| 7. $\frac{1}{2}$ of 118 = _____ | 8. $\frac{3}{8}$ of 56 = _____ | 9. $\frac{1}{10} \times 400 =$ _____ |
| 10. $84 \times \frac{1}{6} =$ _____ | 11. $64 \times \frac{5}{16} =$ _____ | 12. $40 \times \frac{11}{20} =$ _____ |
| 13. $\frac{5}{8}$ of 48 = _____ | 14. $\frac{1}{7}$ of 77 = _____ | 15. $\frac{4}{5} \times 90 =$ _____ |
| 16. $42 \times \frac{3}{14} =$ _____ | 17. $72 \times \frac{5}{8} =$ _____ | 18. $18 \times \frac{2}{3} =$ _____ |
| 19. $\frac{5}{6} \times 84 =$ _____ | 20. $\frac{11}{12} \times 144 =$ _____ | 21. $\frac{6}{7} \times 42 =$ _____ |

22. **Strategy Practice** Complete the table by writing the product of each expression in the box below it. Use a pattern to find each product. Explain the pattern.

$\frac{1}{2} \times 32$	$\frac{1}{4} \times 32$	$\frac{1}{8} \times 32$	$\frac{1}{16} \times 32$

23. **Reasoning** If $\frac{1}{2}$ of 1 is $\frac{1}{2}$, what is $\frac{1}{2}$ of 2, 3, and 4? _____

24. Which is $\frac{2}{3}$ of 225?

A 75 B 113 C 150 D 450

25. **Explain It** Explain why $\frac{1}{2}$ of 2 equals one whole.

Practice 11-1

Name _____

Practice

11-3

Multiplying Mixed Numbers

Estimate the product. Then complete the multiplication.

1. $5\frac{4}{5} \times 7 = \frac{\boxed{}}{5} \times \frac{7}{1} = \boxed{}$

2. $3\frac{2}{3} \times 5\frac{1}{7} = \frac{\boxed{}}{3} \times \frac{\boxed{}}{7} = \boxed{}$

Estimate. Then find each product. Simplify.

3. $4\frac{3}{5} \times \frac{2}{3}$ _____

4. $6 \times 2\frac{2}{7}$ _____

5. $7\frac{4}{5} \times 2\frac{1}{3}$ _____

6. $3\frac{3}{4} \times 2\frac{4}{5}$ _____

7. $2\frac{1}{5} \times \frac{7}{8}$ _____

8. $6\frac{1}{3} \times 1\frac{5}{6}$ _____

9. $1\frac{4}{5} \times 1\frac{1}{3} \times 1\frac{3}{4}$ _____

10. $\frac{3}{4} \times 2\frac{2}{3} \times 5\frac{1}{5}$ _____

11. **Algebra** Write a mixed number for p so that $3\frac{1}{4} \times p$ is more than $3\frac{1}{4}$.

12. A model house is built on a base that measures $9\frac{1}{4}$ in. wide and $8\frac{4}{5}$ in. long. What is the total area of the model house's base?

13. Which is $1\frac{3}{4}$ of $150\frac{1}{2}$?

A 263

B $263\frac{1}{8}$

C $263\frac{3}{8}$

D $264\frac{3}{8}$

14. **Explain It** Megan's dog Sparky eats $4\frac{1}{4}$ cups of food each day. Explain how Megan can determine how much food to give Sparky if she needs to feed him only $\frac{2}{3}$ as much. Solve the problem.

Practice 11-3

Name _____

Practice


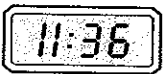
14-6

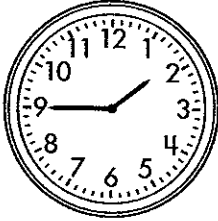

Elapsed Time

Find each elapsed time.

1. 9:59 P.M. to 10:45 P.M. _____

2. 1:45 P.M. to 5:38 P.M. _____

3.  
A.M. A.M.

4.  
P.M. P.M.

Find the end time using the given elapsed time.

5. Start: 3:46 P.M. Elapsed: 2 h 20 min _____

6. Add. 2 h 45 min
 + 3 h 58 min

7. Add. 6 h 47 min
 + 5 h 28 min

The White House Visitor Center is open from 7:30 A.M. until 4:00 P.M.

8. Tara and Miguel got to the Visitor Center when it opened, and spent 1 hour and 20 minutes there. At what time did they leave?

9. Jennifer left the Visitor Center at 3:30 P.M. after spending 40 minutes there. At what time did she arrive?

10. A football game lasted 2 hours and 37 minutes. It finished at 4:22 P.M. When did it start?

A 1:45 P.M.

B 1:55 P.M.

C 2:45 P.M.

D 2:50 P.M.

11. **Explain It** What is 1 hour and 35 minutes before 4:05 P.M.? Explain how you solved this problem.

Name _____

Practice
15-1

Solving Addition and Subtraction Equations

Solve and check each equation.

- | | |
|-------------------------|-------------------------|
| 1. $x + 4 = 16$ _____ | 2. $t - 8 = 15$ _____ |
| 3. $m - 9 = 81$ _____ | 4. $7 + y = 19$ _____ |
| 5. $k - 10 = 25$ _____ | 6. $15 + b = 50$ _____ |
| 7. $f + 18 = 20$ _____ | 8. $w - 99 = 100$ _____ |
| 9. $75 + n = 100$ _____ | 10. $p - 40 = 0$ _____ |

11. Jennifer has \$14. She sold a notebook and pen, and now she has \$18. Solve the equation $14 + m = 18$ to find how much money Jennifer received by selling the notebook and pen.

12. Kit Carson was born in 1809. He died in 1868. Use the equation $1,809 + x = 1,868$ to find how many years Kit Carson lived.

13. **Strategy Practice** Which is the solution for y when $y - 6 = 19$?

- A 13 B 15 C 23 D 25

14. **Explain It** Nellie solved $y - 3 = 16$. Is her answer correct? Explain and find the correct answer if she is incorrect.

$y - 3 = 16$
$y = 13$
Subtract 3

Practice 15-1

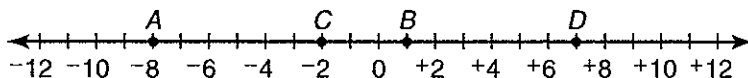
Name _____

Understanding Integers

Write an integer for each word description.

1. a withdrawal of \$50 2. a temperature rise of 14° 3. 10° below zero

Use the number line for 4 through 7. Write the integer for each point.



4. A _____ 5. B _____ 6. C _____ 7. D _____

Compare. Use $>$, $<$, or $=$ for each \bigcirc .

8. $-5 \bigcirc -9$ 9. $+8 \bigcirc -12$ 10. $+21 \bigcirc -26$

Write in order from least to greatest.

11. $-4, +11, -11, +4$ _____, _____, _____, _____

12. $-6, +6, 0, -14$ _____, _____, _____, _____

13. $+11, -8, +7, -4$ _____, _____, _____, _____

14. **Strategy Practice** Which point is farthest to the right on a number line?

- A -6 B -2 C 0 D 2

15. **Explain It** In Fenland, U.K., the elevation from sea level is $-4m$. In San Diego, U.S., it is $+40$ ft. The elevations are given in different units. Explain how to tell which location has a greater elevation.

Practice 17-1