

Name _____

Understanding Rounding

Round each number to the nearest thousand and ten thousand.

1. 68,354 _____

2. 857,836 _____

3. 6,172,438 _____

Round each number to the nearest hundred thousand.

4. 782,954 _____

5. 5,416,755 _____

6. Round the height of Mount Cameroon to the nearest thousand.

7. Round the height of Mount Kilimanjaro to the nearest ten thousand.

African Mountains	
Mountain	Height (in feet)
Mount Kilimanjaro	19,340
Mount Cameroon	13,435
Mount Kenya	17,058
Mount Meru	14,979

8. Which is 346,759 rounded to the nearest ten thousand?

- A** 300,000 **B** 346,000 **C** 350,000 **D** 400,000

9. **Writing to Explain** Explain how you would round 265,588 to the nearest ten thousand.

Name _____

Rounding Whole Numbers

Round each number to the nearest ten.

1. 16,326

2. 412,825

3. 6,512,162

4. 42,084,097

Round each number to the nearest hundred.

5. 1,427

6. 68,136

7. 271,308

8. 7,593,656

Round each number to the nearest thousand.

9. 18,366

10. 409,614

11. 48,229,930

12. 694,563,239

Round each number to the underlined place.

13. 12,108

14. 570,274

15. 9,333,625

16. 534,307,164

17. What is 681,542 rounded to the nearest hundred thousand?

A 600,000

B 680,000

C 700,000

D 780,000

18. **Writing to Explain** Mrs. Kennedy is buying pencils for each of 315 students at Hamilton Elementary. The pencils are sold in boxes of tens. How can she use rounding to decide how many pencils to buy?

Estimating Sums and Differences of Whole Numbers

Estimate each sum or difference.

1.
$$\begin{array}{r} 627 \\ + 95 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 829 \\ - 292 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 987 \\ - 233 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 1,568 \\ + 352 \\ \hline \end{array}$$

5. $4,263 - 1,613$ _____

6. $7,502 + 2,187$ _____

7. $24,141 - 2,177$

8. $64,099 - 55,555$

9. $83,595 + 18,999$

10. About how much larger is the largest ocean than the smallest ocean?

Ocean Area	
Ocean	Area (million sq km)
Arctic Ocean	13,986
Atlantic Ocean	82,217
Indian Ocean	73,481
Pacific Ocean	165,384

11. About how many million square kilometers do all the oceans together cover?

12. Mallory is a pilot. Last week she flew the following round trips in miles: 2,020; 1,358; 952; 2,258; and 1,888. Which of the following is a good estimate of the miles Mallory flew last week?

A 6,000 mi

B 6,800 mi

C 7,600 mi

D 8,600 mi

13. **Writing to Explain** Explain how you would estimate to subtract 189 from 643.

Name _____

Practice

2-6

Adding Whole Numbers

Add.

$$\begin{array}{r} 1. \quad 486 \\ \quad 875 \\ + \quad 45 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 4,334 \\ \quad 4,948 \\ + \quad 890 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 938 \\ \quad 1,487 \\ + \quad 8,947 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 7,226 \\ \quad 1,587 \\ + \quad 72,984 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 54,236 \\ \quad 223 \\ + \quad 7,856 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 80 \\ \quad 960 \\ \quad 4 \\ + \quad 1,986 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 27,987 \\ \quad 2,096 \\ \quad 15,098 \\ + \quad 7,945 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 8,738 \\ \quad 5,234 \\ \quad 836 \\ + \quad 237 \\ \hline \end{array}$$

9. **Number Sense** Luke added $429 + 699 + 314$ and got 950. Is this sum reasonable?

10. What is the combined length of the three longest glaciers?

World's Longest Glaciers	
Glaciers	Length (miles)
Lambert-Fisher Ice Passage	320
Novaya Zemlya	260
Arctic Institute Ice Passage	225
Nimrod-Lennox-King	180

11. What is the total combined length of the four longest glaciers in the world?

12. Which is the sum of $3,774 + 8,276 + 102$?

A 1,251 **B** 12,152 **C** 13,052 **D** 102,152

13. **Writing to Explain** Leona added $6,641 + 1,482 + 9,879$. Should her answer be more than or less than 15,000?

Subtracting Whole Numbers

Subtract.

1.
$$\begin{array}{r} 7,242 \\ - 158 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 520 \\ - 203 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 848 \\ - 257 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 6,797 \\ - 1,298 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 753 \\ - 218 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 7,392 \\ - 4,597 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 3,898 \\ - 1,299 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 3,721 \\ - 459 \\ \hline \end{array}$$

9. Which of the following best describes the answer to the subtraction problem? $3,775 - 1,831$

- A** The answer is less than 1,000.
- B** The answer is about 1,000.
- C** The answer is greater than 1,000.
- D** You cannot tell from the information given.

10. **Writing to Explain** The Environmental Club's goal is to collect 1,525 cans by the end of the summer. The number of cans they collected each week is shown in the table below. How can you find the number of cans they need to collect in week 4 to meet their goal?

Week Number	Number of cans collected
1	378
2	521
3	339
4	

Subtracting Across Zeros

Subtract.

1.
$$\begin{array}{r} 906 \\ - 45 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 3,091 \\ - 1,361 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 4,000 \\ - 2,557 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 800 \\ - 139 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 1,070 \\ - 593 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 8,904 \\ - 3,596 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 3,007 \\ - 2,366 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 523 \\ - 203 \\ \hline \end{array}$$

9. $7,403 - 3,254$

10. $5,067 - 2,987$

11. $6,790 - 1,298$

12. Robert set a goal to swim 1,000 laps in a swimming pool during his summer break. Robert has finished 642 laps. How many more laps does he have to swim in order to meet his goal?

A 332

B 358

C 468

D 472

13. **Writing to Explain** If $604 - 72 = \underline{\hspace{2cm}}$, then $532 + \underline{\hspace{2cm}} = 604$. Explain the process of checking your work.

Name _____

Practice

3-10

Problem Solving: Draw a Picture and Write an Equation

Draw pictures to solve each problem.

1. Terrence has 16 trophies and he wants to put an equal number on 4 shelves. How many trophies will he have on each shelf?

2. Jody is making a sculpture of her dog. If the sculpture is 6 inches long and her dog is 7 times as long as the sculpture, how long is Jody's dog?

3. Lisa has 45 megabytes of space left on her flash drive. She has 5 files that are the same size that will fill up the space. How many megabytes are the files?

4. A store is displaying boxes of a new video game in 7 rows. If the store has 49 copies of the game, how many games are in each row?

5. Mrs. Lopez is 54 and has a daughter who is six years more than a third of her age. Which expression below shows how old Mrs. Lopez's daughter is?

A $54 + 6 \div 3$ **B** $54 \div 3 + 6$ **C** $54 \div 6 + 3$ **D** $54 + 3 \div 6$

6. **Writing to Explain** Jillian wants to organize her CD collection into wooden crates. Each crate holds 8 CDs. Jillian has 48 CDs. How can she use a picture to figure out how many crates she needs?

Multiplying Greater Numbers by 1-Digit Numbers

1.
$$\begin{array}{r} 2,143 \\ \times \quad 5 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 3,121 \\ \times \quad 4 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 11,256 \\ \times \quad 6 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 32,017 \\ \times \quad 7 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 5,502 \\ \times \quad 8 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 87,483 \\ \times \quad 9 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 18,471 \\ \times \quad 6 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 36,572 \\ \times \quad 8 \\ \hline \end{array}$$

9. $3,765 \times 4$

10. $6 \times 7,648$

11. $5 \times 12,264$

12. There are 36,200 pencils on each of 4 shelves at the office supply manufacturer’s warehouse.

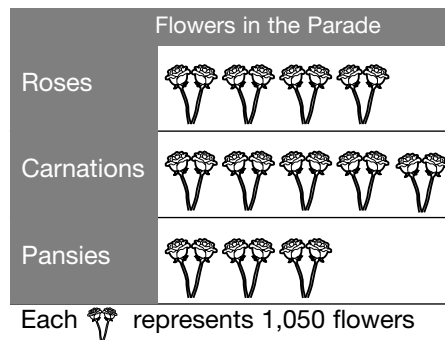
How many pencils are there altogether? _____

13. **Algebra** Find the value of $7n$ when n is 7,565? _____

Use the pictograph for Exercises 14 and 15.

14. How many carnations are on the floats in the parade?

- A 3,150 carnations
- B 4,200 carnations
- C 5,150 carnations
- D 5,250 carnations



15. **Writing to Explain** Karen said there were 4,050 pansies in the parade. Explain her error.

Name _____

Practice

6-6

Multiplying Greater Numbers by 2-Digit Numbers

1.
$$\begin{array}{r} 263 \\ \times 17 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 534 \\ \times 86 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 3,357 \\ \times 32 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 237 \\ \times 53 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 855 \\ \times 54 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 9,362 \\ \times 71 \\ \hline \end{array}$$

7. 421×45

8. 357×74

9. 64×848

10. $93 \times 4,247$

11. $9,989 \times 57$

12. $81 \times 2,777$

13. **Algebra** Find the value of $78 \times n$ when $n = 3,237$. _____

14. Laura addresses 127 envelopes every week. Each envelope contains 4 pieces of paper. How many envelopes does Laura address in one year? Remember that there are 52 weeks in a year.

15. There are 36 large fish tanks at a zoo. Each tank holds 215 gallons of water. How many gallons of water would it take to fill all the tanks?

A 7,740

B 7,613

C 7,610

D 251

16. **Writing to Explain** Is the product of 686 and 50 greater than or less than 30,000? Explain.

Dividing with Remainders

Divide. You may use counters or pictures to help.

1. $4\overline{)27}$

2. $6\overline{)32}$

3. $7\overline{)17}$

4. $9\overline{)29}$

5. $8\overline{)27}$

6. $3\overline{)27}$

7. $5\overline{)28}$

8. $4\overline{)35}$

9. $2\overline{)19}$

10. $7\overline{)30}$

11. $3\overline{)17}$

12. $9\overline{)16}$

If you arrange these items into equal rows, tell how many will be in each row and how many will be left over.

13. 26 shells into 3 rows

14. 19 pennies into 5 rows

15. 17 balloons into 7 rows

16. **Reasonableness** Ms. Nikkel wants to divide her class of 23 students into 4 equal teams. Is this reasonable? Why or why not?

17. Which is the remainder for the quotient of $79 \div 8$?

A 7

B 6

C 5

D 4

18. **Writing to Explain** Pencils are sold in packages of 5. Explain why you need 6 packages in order to have enough for 27 students.

Equivalent Fractions

Find the missing number.

1. $\frac{1}{2} = \frac{\square}{12}$

2. $\frac{6}{10} = \frac{\square}{5}$

3. $\frac{4}{16} = \frac{\square}{4}$

4. $2\frac{4}{20} = 2\frac{\square}{40}$

Multiply or divide to find an equivalent fraction.

5. $\frac{11}{22}$

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

7. $\frac{9}{10}$

8. $\frac{5}{35}$

9. $\frac{7}{12}$

10. Is $\frac{2}{14}$ equivalent to $\frac{3}{7}$? _____

11. In Mark's collection of antique bottles, $\frac{4}{9}$ of the bottles are dark green. Write three equivalent fractions for $\frac{4}{9}$.



12. Write a pair of equivalent fractions for the picture above.

13. At the air show, $\frac{1}{3}$ of the airplanes were gliders. Which fraction is not an equivalent fraction for $\frac{1}{3}$?

A $\frac{5}{15}$

B $\frac{7}{21}$

C $\frac{6}{24}$

D $\frac{9}{27}$

14. **Writing to Explain** In Missy's sports-cards collection, $\frac{5}{7}$ of the cards are baseball. In Frank's collection, $\frac{12}{36}$ are baseball. Frank says they have the same fraction of baseball cards. Is he correct?

Fractions in Simplest Form

For **1** through **18**, write each fraction in simplest form. If it is in simplest form, write “simplest form.”

1. $\frac{13}{14}$ _____

2. $\frac{7}{8}$ _____

3. $\frac{1}{23}$ _____

4. $\frac{15}{20}$ _____

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

6. $\frac{6}{30}$ _____

7. $\frac{5}{18}$ _____

8. $\frac{13}{26}$ _____

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

10. $\frac{7}{21}$ _____

11. $\frac{7}{10}$ _____

12. $\frac{40}{50}$ _____

13. $\frac{18}{36}$ _____

14. $\frac{25}{35}$ _____

15. $\frac{12}{14}$ _____

16. $\frac{8}{9}$ _____

17. $\frac{60}{80}$ _____

18. $\frac{2}{8}$ _____

19. Sheldon has scored $\frac{6}{18}$ of the points in a basketball game. How can you use division to simplify the fraction of the points he scored? What is $\frac{6}{18}$ in simplest form?

20. What is the simplest form of the fraction $\frac{40}{80}$?

A $\frac{4}{8}$

B $\frac{1}{4}$

C $\frac{2}{4}$

D $\frac{1}{2}$

21. **Writing to Explain** If the numerator of a fraction is a prime number, can the fraction be simplified? Why or why not?

Comparing Fractions

Write $>$ or $<$ for each \bigcirc . You may use fraction strips to help.

1. $\frac{1}{2} \bigcirc \frac{3}{13}$

2. $\frac{8}{9} \bigcirc \frac{5}{9}$

3. $\frac{3}{8} \bigcirc \frac{11}{22}$

4. $\frac{3}{3} \bigcirc \frac{7}{8}$

5. $\frac{3}{5} \bigcirc \frac{1}{3}$

6. $\frac{1}{4} \bigcirc \frac{2}{4}$

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

8. $\frac{7}{12} \bigcirc \frac{4}{5}$

9. $\frac{3}{7} \bigcirc \frac{6}{7}$

10. **Number Sense** Explain how you know that $\frac{21}{30}$ is greater than $\frac{2}{3}$.

11. Tina completed $\frac{2}{3}$ of her homework before dinner.
George completed $\frac{4}{7}$ of his homework before dinner.
Who completed a greater fraction of homework? _____

12. Jackson played a video game for $\frac{1}{6}$ hr. Hailey played
a video game for $\frac{1}{3}$ hr. Who played the video game
for a greater amount of time? _____

13. Which fraction is greater than $\frac{3}{4}$?

A $\frac{5}{9}$

B $\frac{17}{24}$

C $\frac{15}{20}$

D $\frac{7}{9}$

14. **Writing to Explain** James says that $\frac{5}{5}$ is greater than $\frac{99}{100}$.
Is he correct? Explain.

Name _____

Adding Fractions with Unlike Denominators

Write the answers in simplest form.

1. $\frac{1}{6} + \frac{1}{3} =$ _____

2. $\frac{1}{5} + \frac{1}{10} =$ _____

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

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

5. $\frac{1}{4} + \frac{2}{5} =$ _____

6. $\frac{1}{4} + \frac{1}{6} =$ _____

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

8. $\frac{1}{4} + \frac{5}{8} =$ _____

9. $\frac{5}{12} + \frac{1}{4}$

10. $\frac{1}{5} + \frac{3}{10}$

11. $\frac{2}{5} + \frac{1}{2}$

12. $\frac{1}{12} + \frac{2}{3}$

13. A recipe calls for $\frac{1}{4}$ cup of whole wheat flour and $\frac{1}{2}$ cup of white flour. How many cups of flour are needed in all? _____

14. **Math Reasoning** To trim a costume, you need $\frac{1}{2}$ yard of lace at the neck and $\frac{2}{6}$ yard to trim both of the wrists. How much lace is needed? _____

15. **Algebra** If $n = \frac{9}{14}$, then $n + \frac{2}{7} =$ _____

16. For the addition $\frac{1}{6} + \frac{2}{3}$, which sum is **NOT** correct?

A. $\frac{9}{12}$

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

C. $\frac{15}{18}$

D. $\frac{20}{24}$

17. **Writing to Explain** What common denominator would you use to add $\frac{1}{3}$, $\frac{1}{4}$, and $\frac{1}{12}$? Explain.

Subtracting Fractions with Unlike Denominators

When you subtract fractions with unlike denominators, you need to change them to equivalent fractions that have a common denominator.

Sylvie wanted to pick $\frac{3}{4}$ of the flowers in her garden. Because it started to rain, she was able to pick only $\frac{1}{3}$ of the flowers. What fraction of the flowers are left for Sylvie to pick?

Find $\frac{3}{4} - \frac{1}{3}$.

Step 1 Rewrite the fractions using a common denominator. *Think:* What number has 4 and 3 as factors? 12

$$\begin{array}{ccc} \frac{3}{4} & = & \frac{9}{12} \\ \uparrow \times 3 & & \uparrow \times 3 \\ \frac{1}{3} & = & \frac{4}{12} \\ \downarrow \times 3 & & \downarrow \times 3 \end{array}$$

Sylvie has $\frac{5}{12}$ of the flowers left to pick.

Step 2 Subtract the equivalent fractions. Write the difference in simplest form.

$$\begin{array}{r} \frac{3}{4} = \frac{9}{12} \\ - \frac{1}{3} = \frac{4}{12} \\ \hline \frac{5}{12} \end{array}$$

$\frac{5}{12}$ is in simplest form.

Write the answers in simplest form.

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

2. $\frac{3}{5} - \frac{1}{10}$

3. $\frac{1}{2} - \frac{1}{8}$

4. $\frac{2}{3} - \frac{1}{6}$

5. $\frac{7}{12} - \frac{1}{3}$

6. $\frac{4}{5} - \frac{2}{10}$

7. $\frac{7}{15} - \frac{2}{5}$

8. $\frac{3}{4} - \frac{3}{16}$

9. $\frac{5}{8} - \frac{1}{2}$

10. $\frac{1}{2} - \frac{1}{5}$

11. At the dance, Lyndi and Josh danced $\frac{3}{4}$ hour without stopping. This is $\frac{3}{8}$ hour more than Kecia and Les danced. How long did Kecia and Les dance? _____