

Hesby Oaks Leadership Charter

Summer Math Packet Ms. Walsh Grade 7

- Read and study the examples
- Complete the Guided Practice
- Complete the independent practice
- Show your work
- Due at the end of the first week of school in the fall



SKILL 1: Factors and Divisibility

Numbers that are multiplied are called **factors**. In $3 \times 8 = 24$, 3 and 8 are the factors. The product, 24, is divisible by each of its factors. When you divide a whole number by one of its factors, the remainder is 0.

To find the factors of a number, you can use divisibility rules. A divisibility rule is a shortcut for determining when one number is divisible by another.

A whole number is divisible by:

- 2 if the ones digit is 0, 2, 4, 6, or 8.
- 3 if the sum of the digits is divisible by 3.
- 5 if the ones digit is 0 or 5.
- 6 if the number is divisible by both 2 and 3.
- 10 if the ones digit is 0.

Example 1

Find the factors of 24.

List all the ways that you could multiply two numbers to get 24.

$$1 \times 24 = 24 \quad 2 \times 12 = 24 \quad 3 \times 8 = 24 \quad 4 \times 6 = 24$$

The factors of 24 are: 1, 2, 3, 4, 6, 8, 12, 24.

Example 2

By which of these numbers is 78 divisible: 2, 3, 5, 6, or 10?

The ones digit is 8. So, 78 is divisible by 2.

Since $7 + 8 = 15$, and 15 is divisible by 3, 78 is divisible by 3.

Because 78 is divisible by 2 and 3, it is divisible by 6.

The ones digit is not 0 or 5, so it is not divisible by 5 or by 10.

Guided Practice

Find the missing factors of 36.

1. $1 \times \underline{\hspace{2cm}} = 36$
2. $2 \times \underline{\hspace{2cm}} = 36$
3. $3 \times \underline{\hspace{2cm}} = 36$
4. $4 \times \underline{\hspace{2cm}} = 36$
5. $6 \times \underline{\hspace{2cm}} = 36$
6. The factors of 36 are: _____.

Write yes or no to indicate if 1,260 is divisible by the given number.

7. 2 _____
8. 3 _____
9. 4 _____
10. 5 _____

SKILL 1: Practice

Answer each question.

1. Which of the following are factors of 16: 1, 2, 3, 4, 5, 6, 7, 8? _____
2. Which of the following are factors of 20: 1, 2, 3, 4, 5, 6, 7, 8? _____
3. List all factors of 28. _____
4. List all factors of 48. _____
5. List all factors of 100. _____

Complete the table. Write yes or no.

	Divisible by:				
	2	3	5	6	10
6. 28					
7. 40					
8. 72					
9. 144					
10. 225					
11. 360					
12. 504					
13. 600					

14. There are 365 days in a non-leap year.
By which of these numbers is 365 divisible: 2, 3, 5, 6, 10? _____



15. Which is not a factor of 54?

Skill 1

- A 6 C 9
B 7 D 27

16. Which is not divisible by 6?

Skill 1

- F 42 H 123
G 132 J 522



SKILL 3: Prime Factorization

If a number is prime, then the only way it can be factored is "1 times itself." If a number is composite, it can be expressed as a product of prime factors. This is called its prime factorization.

Example 1

Find the prime factorization of 6.

The prime factorization of 6 is 2×3 , because 2 and 3 are prime and $2 \times 3 = 6$.

Example 2

Find the prime factorization of 50.

You can use *factor trees* to find prime factors of 50.

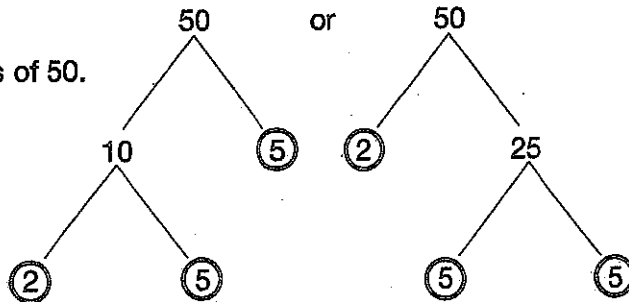
Write 50 as the product of two factors.

Is each factor prime or composite?

Circle each prime factor.

Write each composite factor as the product of two factors.

Continue until all the numbers are prime.

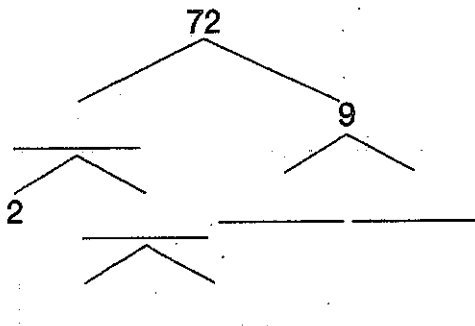


Both factor trees show that $2 \times 5 \times 5$ is the prime factorization of 50.

Guided Practice

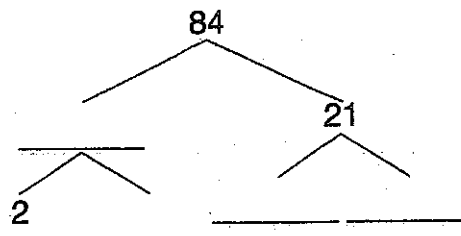
Find the prime factorization of each number by writing the appropriate numbers in each blank.

1.



Prime factorization of 72: _____

2.



Prime factorization of 84: _____

3. Is $2 \times 6 \times 5$ the prime factorization of 60? _____

4. Write the prime factorization of 60. _____

5. Is 7×12 the prime factorization of 84? _____

SKILL 3: Practice

Find the prime factorization.

1. 12 _____
 2. 40 _____
 3. 64 _____

4. 36 _____
 5. 60 _____
 6. 65 _____

7. 20 _____
 8. 30 _____
 9. 56 _____

10. 21 _____
 11. 18 _____
 12. 16 _____

13. 630 _____
 14. 1,001 _____
 15. 625 _____

16. 400 _____
 17. 2,000 _____
 18. 560 _____

19. The prime factorization of a number is $2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 5 \times 5 \times 5$.
 What is the number? _____

20. What number is in the prime factorization of all even numbers? _____

21. Could $2 \times 4 \times 5 \times 9 \times 11$ be the prime factorization of a number? Explain.



22. Which is the prime factorization of 48?

- A $2 \times 2 \times 2 \times 2 \times 3$
- B $2 \times 2 \times 2 \times 6$
- C 4×12
- D 3×16

Skill 3

23. Which number is not composite?
 Skill 2

- F 62
- G 77
- H 95
- J 53



SKILL 6: Greatest Common Factor

Numbers often have common factors. The **greatest common factor (GCF)** of two numbers is the greatest number that is a factor of both of them.

Example 1

Find the greatest common factor (GCF) of 24 and 60.

List all factors of 24: 1, 2, 3, 4, 6, 8, 12, 24

List all factors of 60: 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60

1, 2, 3, 4, 6, and 12 are common factors. The *greatest common factor* is 12.

Example 2

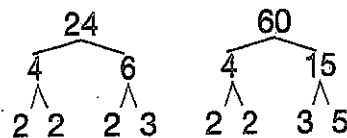
Find the greatest common factor of 24 and 60 by using the prime factorization of each number.

The greatest common factor is the product of the prime factors that the numbers have in common.

Prime factorization of 24: $2 \times 2 \times 2 \times 3$

Prime factorization of 60: $2 \times 2 \times 3 \times 5$

The common prime factors are 2, 2, and 3. So, the greatest common factor (GCF) is $2 \times 2 \times 3$, or 12.



Guided Practice

1. Find the GCF of 12 and 18 by listing all factors of each number.

a. Factors of 12: _____

b. Factors of 18: _____

c. GCF: _____

2. Find the GCF of 18 and 90 by using their prime factorizations.

a. Prime factorization of 18: _____

b. Prime factorization of 90: _____

c. The common prime factors of 18 and 90 are: _____, _____, and _____.

d. The product of the common prime factors is _____.

e. So, the GCF of 18 and 90 is _____.

SKILL 6: Practice

Find the GCF of each pair of numbers by listing all factors of each number.

- | | |
|--------------|--------------|
| 1. 28: _____ | 2. 16: _____ |
| 35: _____ | 24: _____ |
| GCF: _____ | GCF: _____ |
| 3. 30: _____ | 4. 24: _____ |
| 36: _____ | 42: _____ |
| GCF: _____ | GCF: _____ |

Find the GCF of each pair of numbers by using their prime factorizations.

- | | | |
|--------------|--------------|---------------|
| 5. 14: _____ | 6. 18: _____ | 7. 48: _____ |
| 35: _____ | 27: _____ | 54: _____ |
| GCF: _____ | GCF: _____ | GCF: _____ |
| 8. 36: _____ | 9. 40: _____ | 10. 32: _____ |
| 48: _____ | 80: _____ | 36: _____ |
| GCF: _____ | GCF: _____ | GCF: _____ |

Solve.

11. Marcel's age is a common factor of both 48 and 72. She is older than 12. How old is Marcel? _____



12. Which is the GCF of 24 and 36? Skill 6
- | | |
|------|------|
| A 3 | C 2 |
| B 24 | D 12 |

13. Which is the prime factorization of 56 using exponents? Skill 5
- | | |
|------------------|------------------|
| F 7×8 | H $2^2 \times 7$ |
| G $2^3 \times 7$ | J 2×28 |



SKILL 7: Least Common Multiple

The **least common multiple (LCM)** of two or more whole numbers is the smallest number that is a common multiple of the given numbers.

Example 1

Find the least common multiple (LCM) of 6 and 8.

List the first several multiples of each number.

Multiples of 6: 6, 12, 18, **24**, 30, 36, 42, **48**

Multiples of 8: 8, 16, **24**, 32, 40, **48**, 56

common multiples

The least common multiple (LCM) of 6 and 8 is 24.

Example 2

Find the least common multiple of 15 and 30.

When one number is a multiple of the other, the larger number is the least common multiple.

30 is 2×15 , so 30 is a multiple of 15. The least common multiple of 15 and 30 is 30.

Example 3

Find the least common multiple of 30 and 21 by using prime factorization.

Write the prime factors of each number. Circle pairs of common factors as you did to find GCF.

$$30 = 2 \times \textcircled{3} \times 5$$

$$21 = \textcircled{3} \times 7$$

To find the LCM, multiply one number by the uncircled factors of the other number.
The LCM of 30 and 21 = $30 \times 7 = 210$.

Guided Practice

1. Find the least common multiple of 12 and 16.

a. List the first six multiples of 12: _____

b. List the first six multiples of 16: _____

c. LCM: _____

2. Find the least common multiple of 24 and 48.

a. Is 48 a multiple of 24? _____

b. LCM: _____

3. Find the least common multiple of 6 and 11.

a. Do 6 and 11 have a common factor? _____

b. LCM: _____

SKILL 7: Practice

Find the LCM of each pair of numbers by listing multiples of each number.

1. 3: _____

2. 3: _____

2: _____

4: _____

LCM: _____

LCM: _____

3. 5: _____

4. 2: _____

4: _____

8: _____

LCM: _____

LCM: _____

Find the LCM of each pair.

5. 6, 5 _____

6. 3, 21 _____

7. 9, 5 _____

8. 17, 3 _____

9. 6, 23 _____

10. 21, 7 _____

11. 6, 28 _____

12. 14, 18 _____

13. 23, 2 _____

14. 11, 33 _____

15. 6, 10 _____

16. 36, 45 _____

17. 31, 5 _____

18. 10, 14 _____

19. 22, 4 _____

20. 20, 30 _____

21. 29, 3 _____

22. 16, 18 _____

23. 12, 18 _____

24. 20, 25 _____

25. 15, 40 _____

Solve.

26. Hot dogs come 8 to a package. Buns come 6 to a package. What is the fewest number of packages of each you would have to buy so that you have exactly as many hot dogs as buns?

_____ packages of hot dogs; _____ packages of buns

TEST PREP

27. Which is the LCM of 15 and 24?

Skill 7

A 3

C 9

B 120

D 360

28. Which is the GCF of 24 and 40?

Skill 6

F 960

H 8

G 120

J 4



SKILL 11: Equivalent Fractions

If two fractions represent the same quantity, they are **equivalent**.

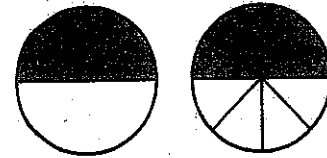
Example 1

Use a model to show that $\frac{1}{2}$ and $\frac{4}{8}$ are equivalent fractions.

Draw a circle divided into two parts and shade $\frac{1}{2}$.

Draw more lines to divide each half into 4 parts. This shows $\frac{4}{8}$.

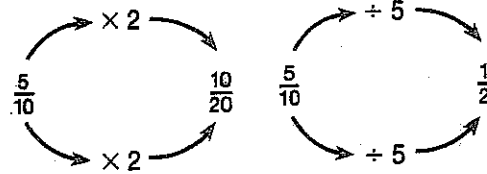
$$\frac{1}{2} = \frac{4}{8}$$



Example 2

Find two fractions that are equivalent to $\frac{5}{10}$.

Multiply or divide the numerator and the denominator by the same nonzero number. This is the same as multiplying or dividing the fraction by 1.



$$\begin{array}{l} \text{numerator} \rightarrow 5 \times 2 = 10 \\ \text{denominator} \rightarrow 10 \times 2 = 20 \end{array}$$

So, $\frac{5}{10}$ is equivalent to $\frac{10}{20}$.

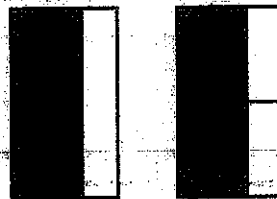
$$\begin{array}{l} \text{numerator} \rightarrow 5 \div 5 = 1 \\ \text{denominator} \rightarrow 10 \div 5 = 2 \end{array}$$

So, $\frac{5}{10}$ is equivalent to $\frac{1}{2}$.

Guided Practice

1. Find a fraction equivalent to $\frac{2}{3}$.
Use the models at the right.

$$\frac{2}{3} = \underline{\hspace{2cm}}$$



2. Multiply to find an equivalent fraction.

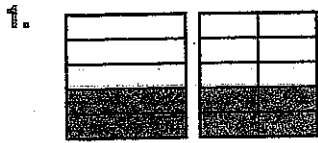
$$\frac{2}{6} = \frac{2 \times \square}{6 \times \square} = \frac{\square}{\square}$$

3. Divide to find an equivalent fraction.

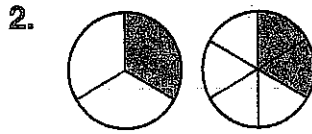
$$\frac{6}{8} = \frac{6 \div \square}{8 \div \square} = \frac{\square}{\square}$$

SKILL 11: Practice

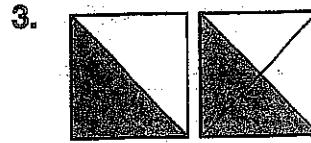
Use the models to find an equivalent fraction.



$\frac{2}{5} =$ _____



$\frac{1}{3} =$ _____



$\frac{1}{2} =$ _____

Multiply numerator and denominator by the given number to find an equivalent fraction.

4. $3; \frac{4}{7} =$ _____

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

6. $5; \frac{2}{3} =$ _____

7. $6; \frac{5}{8} =$ _____

8. $10; \frac{2}{11} =$ _____

9. $8; \frac{3}{5} =$ _____

Divide numerator and denominator by the given number to find an equivalent fraction.

10. $2; \frac{10}{12} =$ _____

11. $6; \frac{36}{42} =$ _____

12. $5; \frac{20}{30} =$ _____

13. $9; \frac{27}{45} =$ _____

14. $10; \frac{50}{80} =$ _____

15. $4; \frac{44}{64} =$ _____

16. Find an equivalent fraction for $\frac{10}{18}$ that has a smaller denominator.17. Find an equivalent fraction for $\frac{9}{14}$ that has a larger denominator.18. Find an equivalent fraction for $\frac{30}{36}$ that has a smaller denominator. Then find one with a larger denominator.**TEST PREP**19. Which is equivalent to $\frac{4}{5}$?

A $\frac{6}{7}$

C $\frac{4}{10}$

B $\frac{12}{15}$

D $\frac{2}{10}$

Skill 11

20. Which tells about how full the glass is?

F $\frac{1}{4}$

H $\frac{3}{4}$

G $\frac{1}{2}$

J $\frac{1}{8}$





SKILL 12: Simplest Form

A fraction is in simplest form when the only common factor of the numerator and the denominator is 1.

Example 1

Write $\frac{8}{24}$ in simplest form.

Divide the numerator and the denominator by a common factor.

$$\frac{8 \div 2}{24 \div 2} = \frac{4}{12}$$

not in simplest form

→

Continue dividing if there are still common factors (other than 1).

$$\frac{4 \div 4}{12 \div 4} = \frac{1}{3}$$

in simplest form

→

The fraction is in simplest form because the only common factor of 1 and 3 is 1.

$$\frac{8}{24} = \frac{1}{3}$$

Example 2

Write $\frac{36}{42}$ in simplest form.

To write a fraction in simplest form, you can divide the numerator and the denominator by their greatest common factor (GCF).

Factors of 36: 1, 2, 3, 4, 6, 9, 12, 18, 36

Factors of 42: 1, 2, 3, 6, 7, 14, 21, 42

The GCF is 6.

$$\frac{36}{42} = \frac{36 \div 6}{42 \div 6} = \frac{6}{7}$$

$\frac{6}{7}$ is in simplest form.

Guided Practice

1. Write $\frac{4}{10}$ in simplest form.

a. What is the GCF of 4 and 10? _____

b. Divide numerator and denominator by your answer to part a.

$$\frac{4 \div \square}{10 \div \square} = \frac{\square}{\square}$$

2. Write $\frac{32}{40}$ in simplest form. _____

SKILL 12: Practice

Find the GCF of the numerator and denominator in each fraction.
Then write the fraction in simplest form.

1. $\frac{6}{9}$

GCF: _____

Simplest form: _____

2. $\frac{10}{40}$

GCF: _____

Simplest form: _____

3. $\frac{28}{48}$

GCF: _____

Simplest form: _____

Write in simplest form.

4. $\frac{12}{24}$ _____

5. $\frac{9}{21}$ _____

6. $\frac{8}{10}$ _____

7. $\frac{6}{28}$ _____

8. $\frac{18}{20}$ _____

9. $\frac{30}{38}$ _____

10. $\frac{8}{20}$ _____

11. $\frac{12}{18}$ _____

12. $\frac{14}{32}$ _____

13. $\frac{8}{12}$ _____

14. $\frac{12}{16}$ _____

15. $\frac{12}{30}$ _____

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

17. $\frac{6}{42}$ _____

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

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

20. $\frac{6}{10}$ _____

21. $\frac{6}{12}$ _____

22. $\frac{24}{30}$ _____

23. $\frac{21}{28}$ _____

24. $\frac{14}{24}$ _____

25. $\frac{36}{48}$ _____

26. $\frac{16}{52}$ _____

27. $\frac{18}{81}$ _____

28. A kilometer is about $\frac{6}{10}$ of a mile.

Write this fraction in simplest form. _____

29. Last week, $\frac{25}{30}$ of the students in Mr. Lim's class went on a field trip. Write this fraction in simplest form. _____

30. The band members make up $\frac{35}{100}$ students at Winfield Middle School. Write this fraction in simplest form. _____

TEST PREP

31. Which is in simplest form?

Skill 12

A $\frac{9}{16}$

C $\frac{9}{18}$

B $\frac{6}{15}$

D $\frac{8}{14}$

32. Which is equivalent to $\frac{5}{8}$?

Skill 11

F $\frac{6}{10}$

H $\frac{3}{4}$

G $\frac{10}{14}$

J $\frac{20}{32}$



SKILL 13: Writing Fractions with the Least Common Denominator

The least common denominator (LCD) of two or more fractions is the number that is the LCM of their denominators.

Once you have found the least common denominator, write equivalent fractions with this denominator.

Example

Find the least common denominator for $\frac{5}{8}$ and $\frac{1}{12}$. Then write an equivalent fraction for each, using the least common denominator.

The denominators are 8 and 12.

Multiples of 8: 8, 16, 24, 32, 40

Multiples of 12: 12, 24, 36, 48

The LCM of 8 and 12 is 24.

Write an equivalent fraction of $\frac{5}{8}$ and $\frac{1}{12}$, using 24 as the denominator.

Since $8 \times 3 = 24$, multiply 5 by 3 to obtain the numerator.

Since $12 \times 2 = 24$, multiply 1 by 2 to obtain the numerator.

$$\frac{5}{8} = \frac{5 \times 3}{8 \times 3} = \frac{15}{24}$$

$$\frac{1}{12} = \frac{1 \times 2}{12 \times 2} = \frac{2}{24}$$

So, using the LCD of 24, $\frac{5}{8} = \frac{15}{24}$ and $\frac{1}{12} = \frac{2}{24}$.

Guided Practice

1. Write $\frac{1}{3}$ and $\frac{3}{4}$ as equivalent fractions with the least common denominator.

a. What is the LCM for 3 and 4? _____

b. By what number will you multiply the numerator and denominator of $\frac{1}{3}$? _____

c. $\frac{1 \times \square}{3 \times \square} = \frac{\square}{\square}$

d. By what number will you multiply the numerator and denominator of $\frac{3}{4}$? _____

e. $\frac{3 \times \square}{4 \times \square} = \frac{\square}{\square}$

2. Write $\frac{1}{2}$ and $\frac{1}{3}$ as equivalent fractions with the least common denominator. _____

SKILL 13: Practice

Find the LCM for each pair of numbers.

1. 4, 5 _____ 2. 6, 9 _____ 3. 8, 10 _____ 4. 6, 8 _____
 5. 9, 12 _____ 6. 4, 8 _____ 7. 6, 7 _____ 8. 5, 10 _____

Find the least common denominator for each pair of fractions. Then write an equivalent fraction for each, using the least common denominator.

9. $\frac{3}{5}, \frac{1}{2}$ 10. $\frac{1}{6}, \frac{4}{7}$ 11. $\frac{3}{4}, \frac{3}{8}$
 LCD: _____ LCD: _____ LCD: _____

Write an equivalent fraction for each, using the least common denominator.

12. $\frac{7}{9}, \frac{1}{6}$ 13. $\frac{1}{2}, \frac{9}{10}$ 14. $\frac{5}{8}, \frac{3}{7}$

 15. $\frac{5}{9}, \frac{3}{10}$ 16. $\frac{4}{7}, \frac{1}{2}$ 17. $\frac{3}{8}, \frac{3}{5}$

 18. $\frac{5}{12}, \frac{5}{6}$ 19. $\frac{1}{4}, \frac{7}{8}$ 20. $\frac{2}{5}, \frac{2}{7}$

 21. $\frac{11}{15}, \frac{3}{5}$ 22. $\frac{5}{12}, \frac{7}{16}$ 23. $\frac{13}{18}, \frac{17}{24}$

24. Keri keeps her computer CDs on two shelves. One shelf is $\frac{3}{4}$ full. The other is $\frac{5}{6}$ full. Write an equivalent fraction for each, using the least common denominator. _____

TEST PREP

25. What is the least common denominator for $\frac{5}{6}$ and $\frac{3}{8}$? *Skill 13*
 A 48 C 12
 B 24 D 16

26. Which is the simplest form? *Skill 12*
 F $\frac{10}{12}$ H $\frac{9}{14}$
 G $\frac{4}{6}$ J $\frac{7}{21}$



SKILL 14: Improper Fractions and Mixed Numbers

An improper fraction has a numerator that is greater than or equal to its denominator. So, it has a value greater than or equal to 1. A mixed number shows the sum of a whole number and a fraction.

Example 1

Write an improper fraction and a mixed number to describe the picture at the right.



The shapes are divided into fifths, so the denominator of the fraction will be 5. There are 12 shaded parts, so the numerator will be 12.

$$\frac{12}{5} \leftarrow \begin{array}{l} 12 \text{ shaded parts} \\ \leftarrow \text{all parts are fifths} \end{array}$$

There are 2 wholes shaded.

The third shape has 2 fifths shaded.

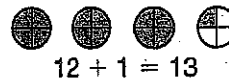
$$\text{two wholes} \rightarrow 2\frac{2}{5} \leftarrow \begin{array}{l} 2 \text{ shaded parts} \\ \leftarrow \text{all parts are fifths} \end{array}$$

The improper fraction $\frac{12}{5}$ and the mixed number $2\frac{2}{5}$ are equivalent.

Example 2

Write $3\frac{1}{4}$ as an improper fraction.

Step 1: Multiply the denominator by the whole number.



$$12 + 1 = 13$$

Step 2: Add the numerator.

Step 3: Use the sum from Step 2 as the numerator of the improper fraction. Use the denominator of the fraction.

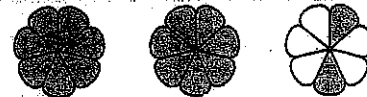
$$\begin{array}{r} 3 \\ + \frac{1}{4} \\ \hline \end{array}$$

So, $3\frac{1}{4} = \frac{13}{4}$. The improper fraction is $\frac{13}{4}$.

$$4 \times 3 = 12$$

Guided Practice

1. Write an improper fraction and a mixed number to describe the picture at the right. _____



2. Write $3\frac{4}{5}$ as an improper fraction.

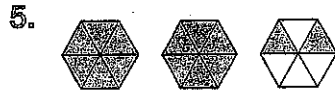
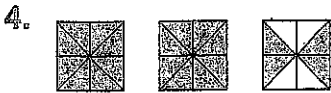
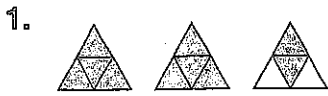
a. How many fifths are in 3 wholes? _____

b. How many total fifths? _____

c. Improper fraction: _____

SKILL 14: Practice

Write an improper fraction and a mixed number to describe each picture.



Write each mixed number as an improper fraction.

7. $2\frac{1}{6}$ _____

8. $5\frac{1}{5}$ _____

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

10. $13\frac{1}{2}$ _____

11. $8\frac{3}{4}$ _____

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

13. $14\frac{2}{9}$ _____

14. $12\frac{2}{3}$ _____

15. $3\frac{5}{8}$ _____

16. $9\frac{1}{9}$ _____

17. $7\frac{4}{5}$ _____

18. $8\frac{1}{3}$ _____

19. $4\frac{1}{4}$ _____

20. $9\frac{1}{2}$ _____

21. $12\frac{1}{3}$ _____

22. $2\frac{4}{7}$ _____

Solve.

23. Muriel counted 17 quarters in her bank. Write the amount of money she has in her bank as a mixed number.
- _____

TEST PREP

24. Which shows the improper fraction for $6\frac{4}{7}$?

A $\frac{10}{7}$

C $\frac{46}{7}$

B $\frac{42}{7}$

D $\frac{64}{7}$

Skill 14

25. Which shows equivalent fractions for $\frac{5}{6}$ and for $\frac{11}{15}$ using the least common denominator?

F $\frac{25}{30}, \frac{22}{30}$

H $\frac{5}{30}, \frac{11}{30}$

G $\frac{75}{90}, \frac{66}{90}$

J $\frac{50}{60}, \frac{44}{60}$

Skill 13



SKILL 15: Improper Fractions, Quotients, and Mixed Numbers

A fraction shows division. The numerator is the dividend and the denominator is the divisor.

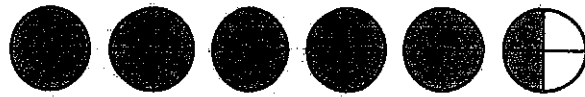
Example 1

Write $\frac{22}{4}$ as a whole or mixed number.

$$\begin{array}{r} 5 \text{ R}2 \\ 4 \overline{)22} \\ \underline{-20} \\ 2 \end{array}$$

The 2 in the remainder represents $\frac{2}{4}$, or $\frac{1}{2}$ in simplest form.

$$\frac{22}{4} = 5\frac{2}{4} = 5\frac{1}{2}$$



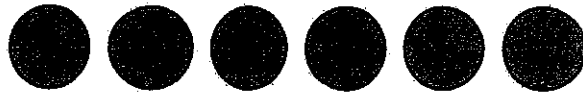
$$\frac{22}{4} = 5\frac{1}{2}$$

Example 2

Write $\frac{18}{3}$ as a whole or mixed number.

$$\begin{array}{r} 6 \\ 3 \overline{)18} \end{array}$$

$$\frac{18}{3} = 6$$



$$\frac{18}{3} = 6$$

Guided Practice

Answer each question.

1. Write $\frac{34}{3}$ as a whole or mixed number.

a. What is the quotient? _____

b. What is the remainder? _____

c. Write the result as a mixed number. _____

2. Write $\frac{62}{9}$ as a whole or mixed number.

a. What is the quotient? _____

b. What is the remainder? _____

c. Write the result as a mixed number. _____

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

3. $\frac{28}{7}$ _____

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

5. $\frac{7}{4}$ _____

SKILL 15: Practice

Write each fraction as a whole or mixed number.
Express fractions in simplest form.

- | | | |
|----------------------------|----------------------------|---------------------------|
| 1. $\frac{30}{6}$ _____ | 2. $\frac{43}{7}$ _____ | 3. $\frac{14}{7}$ _____ |
| 4. $\frac{24}{6}$ _____ | 5. $\frac{32}{16}$ _____ | 6. $\frac{48}{8}$ _____ |
| 7. $\frac{72}{9}$ _____ | 8. $\frac{80}{10}$ _____ | 9. $\frac{16}{5}$ _____ |
| 10. $\frac{56}{7}$ _____ | 11. $\frac{90}{9}$ _____ | 12. $\frac{68}{11}$ _____ |
| 13. $\frac{76}{12}$ _____ | 14. $\frac{45}{5}$ _____ | 15. $\frac{38}{19}$ _____ |
| 16. $\frac{88}{10}$ _____ | 17. $\frac{122}{11}$ _____ | 18. $\frac{96}{6}$ _____ |
| 19. $\frac{144}{12}$ _____ | 20. $\frac{56}{3}$ _____ | 21. $\frac{39}{9}$ _____ |
| 22. $\frac{120}{8}$ _____ | 23. $\frac{87}{3}$ _____ | 24. $\frac{67}{4}$ _____ |
| 25. $\frac{94}{3}$ _____ | 26. $\frac{135}{9}$ _____ | 27. $\frac{91}{7}$ _____ |

Show each dinosaur measurement as a mixed number.

28. A geranosaurus was $\frac{6}{5}$ m long. _____
29. Each arm of a deinocerius was $\frac{17}{2}$ ft long. _____
30. A hypsilophodon was $\frac{23}{10}$ m long. _____



31. Write $\frac{31}{7}$ as a whole or mixed number.

Skill 15

- | | |
|------------------|------------------|
| A 4 | C $\frac{4}{7}$ |
| B $3\frac{4}{7}$ | D $4\frac{3}{7}$ |

32. Which shows the mixed number for $\frac{53}{7}$?

Skill 14

- | | |
|------------------|-------------------|
| F $8\frac{4}{7}$ | H $7\frac{5}{7}$ |
| G $7\frac{4}{7}$ | J $6\frac{11}{7}$ |