Name: _____ Date: _____

6 Chapter Review

Key Words

For #1 to #3, write the number that matches the description.

1. $3\frac{1}{4}$ _____ improper fraction

2. $\frac{8}{9}$ _____ mixed number

3. $\frac{11}{3}$ _____ proper fraction

4. **a)** Unscramble the letters to make a key word.

CIRCLOPERA: R _____ _____ _____ _____ _____ _____ _____ _____ L

b) What does this word mean?

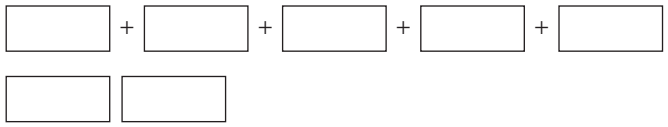
_____

6.1 Multiplying a Fraction and a Whole Number, pages 288–293

5. Find the product using a diagram.

$5 \times \frac{1}{4}$

- ❒ Divide each rectangle into 4 parts.
- ❒ Shade 1 part in each rectangle.
- ❒ Add the shaded parts.



$5 \times \frac{1}{4}$

$= \frac{1}{4} + \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square}$

$= \frac{\square}{\square}$

$= \_\_\_\_\_ \frac{\square}{\square}$

Name: _____ Date: _____

6. Use a number line to multiply.

$4 \times \frac{2}{3}$

$= \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square}$

$= \frac{\square}{\square}$

$= \_\_\_\_\_ \frac{\square}{\square}$

7. The average mass of a porcupine is about 12 kg.

The average mass of a raccoon is about $\frac{3}{4}$ of a porcupine's mass.

What is the average mass of a raccoon?

Use diagrams or a number line to help you.

$\_\_\_\_\_ \times \frac{\square}{\square}$

Sentence: _____

8. The length of a rectangle is 6 cm. The width is $\frac{2}{3}$ of the length.

What is the width?

Sentence: _____

Name: _____ Date: _____

6.2 Dividing a Fraction by a Whole Number, pages 295–300

9. Use a diagram to divide.

a) $\frac{3}{4} \div 2$

❒ Divide and shade the fraction strip to show $\frac{3}{4}$.

❒ Divide each quarter into 2 equal parts.

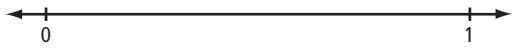
There are _____ parts in the whole,

so each part is $\frac{\square}{\square}$.

So, $\frac{3}{4} \div 2 = \frac{\square}{\square}$.

b) $\frac{2}{3} \div 4$

❒ Label the number line to show thirds.



❒ Divide each third into 4 equal parts.

There are _____ parts in a whole, so

each part is $\frac{\square}{\square}$.

❒ Use brackets to divide $\frac{2}{3}$ into 4 equal parts.

Each part is $\frac{\square}{\square}$.

So, $\frac{2}{3} \div 4 = \frac{\square}{\square}$.

10. A recipe for making 6 servings of potato salad includes $\frac{1}{2}$ an onion.

What fraction of an onion is in each serving?

$\frac{\square}{\square} \div$ _____

Sentence: _____

Name: _____ Date: _____

6.3 Multiplying Proper Fractions, pages 302–308

11. Use a diagram to solve.

a) $\frac{1}{2} \times \frac{3}{4}$

❒ Divide the length in half.

❒ Shade $\frac{1}{2}$.

❒ Divide the width into quarters.

❒ Draw slanted lines on $\frac{3}{4}$ of it.

$$\frac{\text{\# of shaded parts with lines}}{\text{total \# of parts}} = \frac{\square}{\square}$$

So, $\frac{1}{2} \times \frac{3}{4} = \frac{\square}{\square}$.

b) $\frac{2}{3} \times \frac{1}{4}$

❒ Divide the length in thirds.

❒ Shade $\frac{2}{3}$.

❒ Divide the width into quarters.

❒ Draw slanted lines on $\frac{1}{4}$ of it.

$$\frac{\text{\# of shaded parts with lines}}{\text{total \# of parts}} = \frac{\square}{\square}$$

So, $\frac{2}{3} \times \frac{1}{4} = \frac{\square}{\square}$.

12. Estimate and calculate $\frac{3}{5} \times \frac{3}{5}$.

Estimate:

Is $\frac{3}{5}$ closer to 0, $\frac{1}{2}$ or 1?

$$\frac{3}{5} \approx \frac{\square}{\square}$$

$$\frac{3}{5} \times \frac{3}{5} \approx \frac{\square}{\square} \times \frac{\square}{\square}$$

$$\approx \frac{\square}{\square}$$

Calculate:

$$\frac{3}{5} \times \frac{3}{5}$$

$$= \frac{\square}{\square}$$

Name: _____ Date: _____

6.4 Multiplying Improper Fractions and Mixed Numbers, pages 310–318

13. Estimate and calculate $\frac{8}{3} \times \frac{6}{5}$. Write your answers in lowest terms.

Estimate:

Change to mixed numbers:

$\frac{8}{3} = \frac{\square}{\square} + \frac{\square}{\square} + \frac{2}{3}$

$= \_\_\_\_\_ \frac{2}{3}$

$\frac{6}{5} = \frac{5}{5} + \frac{\square}{\square}$

$= \_\_\_\_\_$

$\frac{8}{3} \approx \_\_\_\_\_$ and $\frac{6}{5} \approx \_\_\_\_\_$

$\_\_\_\_\_ \times \_\_\_\_\_ = \_\_\_\_\_$

So, $\frac{8}{3} \times \frac{6}{5} \approx \_\_\_\_\_$.

Calculate:

$\frac{8}{3} \times \frac{6}{5}$

$= \frac{\square}{\square}$

$\div 3$

$\frac{\square}{\square} = \frac{\square}{\square}$

$\div 3$

$= \_\_\_\_\_ \frac{\square}{\square}$

14. The distance from Winnipeg to Regina is 570 km.

The distance from Winnipeg to Calgary is $2\frac{1}{3}$ times the distance from Winnipeg to Regina.

What is the distance from Winnipeg to Calgary?

$\_\_\_\_\_ \times 2\frac{1}{3}$

Sentence: _____

Name: _____ Date: _____

6.5 Dividing Fractions and Mixed Numbers, pages 320–327

15. Divide.

a) $\frac{2}{3} \div \frac{5}{6}$

$= \frac{2}{3} \times \frac{\square}{\square}$ Multiply by the reciprocal.

$= \frac{\square}{\square}$ Write in lowest terms.

$= \frac{\square}{\square}$

b) $3\frac{1}{2} \div 2\frac{1}{4}$

- ❒ Write the mixed numbers as improper fractions.
- ❒ Multiply by the reciprocal.
- ❒ Write as a mixed number.

16. A horse eats $\frac{1}{2}$ of a bale of hay per day.

How long will 15 bales of hay last?

$15 \div \frac{\square}{\square}$

Sentence: _____

Name: _____ Date: _____

6.6 Applying Fraction Operations, pages 329–336

17. Calculate.

a) $\frac{1}{3} + \frac{3}{2} \times \frac{1}{3}$

$= \frac{1}{3} + \frac{\square}{\square}$

Find a common denominator.

b) $1\frac{1}{2} \div \left(\frac{7}{8} - \frac{5}{8}\right)$

Brackets first.

$= 1\frac{1}{2} \div \frac{\square}{\square}$

18. Tracy earns $12/h as a cashier.
When she works more than 32 h in 1 week, she earns time-and-a-half.
How much does Tracy earn for working 40 h in 1 week?

Amount earned at regular pay: _____ × _____ = _____

Hours worked at time-and-a-half: _____ – _____ = _____

Time worked over 32 h: _____ × $1\frac{1}{2}$

Amount earned at time-and-a-half:

_____ × _____ = _____

Total earnings = _____ + _____

= _____

Sentence: _____