

Warm-Up

Do This Now 😊

MULTIPLYING FRACTIONS

PRACTICE PROBLEMS

Name _____

#1 Find the product.

$$\frac{2}{7} \times \frac{3}{5} =$$

$$\boxed{\frac{6}{35}}$$

#2 Find the product:

$$\frac{1}{14} \times \frac{2}{6} =$$

$$\frac{2}{84} = \boxed{\frac{1}{42}}$$

$$\begin{array}{r} 214 \\ \times 6 \\ \hline 84 \end{array}$$

$$\frac{1}{14} \times \frac{2}{6} = \boxed{\frac{1}{42}}$$

#3 Find the product:

$$\frac{6}{8} \times \frac{2}{6} =$$

$$\frac{12}{48} = \frac{3}{12} = \boxed{\frac{1}{4}}$$

$$\frac{6}{8} \times \frac{2}{6} = \boxed{\frac{1}{4}}$$

#4 Find the product:

$$\frac{1}{18} \times \frac{8}{164} =$$

$$\boxed{\frac{1}{20}}$$

$$\begin{array}{r} 315 \\ \times 16 \\ \hline 90 \\ \hline 150 \\ \hline 240 \end{array}$$

$$\frac{12}{240} = \frac{6}{120} = \frac{3}{60} = \boxed{\frac{1}{20}}$$

#5 Find the product:

$$1\frac{2}{3} \times 2\frac{1}{4} =$$

$$1\frac{5}{3} \times 2\frac{1}{4} = 3\frac{3}{4}$$

$$\left[(3 \times 0) + 2 \right] \times \left[(4 \times 2) + 1 \right]$$

#6 Find the product:

$$\frac{8}{1} \times \frac{5}{14} =$$

$$\frac{40}{14} = 2\frac{12}{14} = \boxed{2\frac{6}{7}}$$

#7 The length of park is $\frac{2}{3}$ miles. The width is $1\frac{1}{4}$ miles. What is the area, in square miles, of the park?

$$1\frac{1}{4} \times \frac{2}{3} = \frac{10}{12} = \boxed{\frac{5}{6}}$$

#8 There are 60 girls who try out for the track team. Only $\frac{6}{8}$ of the girls will make the team. How many girls do not make the team?

$$\frac{60}{1} \times \frac{2}{8} = \frac{120}{8}$$

$\frac{6}{8}$ make it
 $\frac{2}{8}$ don't make it

$$60 - 45 = 15$$

$$\frac{60}{1} \times \frac{6}{8} = \frac{360}{8} = 45$$

$$\begin{array}{r} 15 \\ 8 \overline{) 120} \\ \underline{96} \\ 24 \\ \underline{24} \\ 0 \end{array}$$

Name: _____

Date: _____

DIVIDING FRACTIONS

Last page is HW.

GUIDED NOTES

IMPORTANT VOCABULARY: Due next class.

- **Reciprocal:** The multiplicative inverse. (FLIP)
- **Quotient:** The answer to a division problem.

DIVIDING FRACTIONS

1. To find the reciprocal of a number, write the number as a fraction. If it's a whole number, put a '1' underneath it. If it's a mixed number, convert it to an improper fraction.

2. Then, invert the numerator and denominator. (FLIP)

3. Any number times its reciprocal is one.

4. Find the reciprocal of each number below.

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

$$\frac{2}{5} \times \frac{5}{2} = 1$$

$$\frac{8}{9} \times \frac{9}{8} = 1$$

$$7 \times \frac{1}{7} = 1$$

5. To divide fractions, change the operation to multiplication.

6. Then, multiply the dividend by the reciprocal of the divisor.

7. An easy way to remember it is:

KEEP the dividend the same (1st fraction)

CHANGE division to multiplication

FLIP the divisor to its reciprocal (2nd fraction)

GUIDED PRACTICE

$$\frac{1}{2} \div \frac{2}{3} =$$

$$\frac{1}{2} \times \frac{3}{2} = \boxed{\frac{3}{4}}$$

$$\frac{3}{7} \div \frac{3}{8} =$$

$$\frac{3}{7} \times \frac{8}{3} = \frac{24}{21} = 1\frac{3}{21} = \boxed{1\frac{1}{7}}$$

Name: _____

Date: _____

DIVIDING FRACTIONS

PRACTICE PROBLEMS

Find each quotient. Simplify your answers.

#1 $\frac{2}{9} \div \frac{10}{14} =$

$$\frac{2}{9} \times \frac{14}{10} = \frac{28}{90} = \boxed{\frac{14}{45}}$$

#2 $\frac{6}{10} \div \frac{2}{7} =$

$$\frac{6}{10} \times \frac{7}{2} = \frac{42}{20} = 2\frac{2}{20} = \boxed{2\frac{1}{10}}$$

#3 $\frac{4}{9} \div \frac{8}{12} =$

$$\frac{4}{9} \times \frac{12}{8} = \frac{48}{72} = \frac{24}{36} = \frac{12}{18} = \boxed{\frac{2}{3}}$$

#4 $\frac{6}{14} \div \frac{1}{8} =$

$$\frac{6}{14} \times \frac{8}{1} = \frac{48}{14} = 3\frac{6}{14} = \boxed{3\frac{3}{7}}$$

#5 $\frac{1}{3} \div \frac{15}{21} =$

$$\frac{1}{3} \times \frac{21}{15} = \frac{21}{45} = \boxed{\frac{7}{15}}$$

#6 $\frac{3}{24} \div \frac{2}{6} =$

$$\frac{3}{24} \times \frac{6}{2} = \frac{18}{48} = \boxed{\frac{3}{8}}$$

#7 Shea is making costumes for the school play. She has 14 feet of ribbon. She needs to cut pieces that are $\frac{3}{5}$ feet long. How many full pieces can Shea cut? How much will she have leftover.

$$14 \div \frac{3}{5}$$

$$\frac{14}{1} \times \frac{5}{3} = \frac{70}{3} = 23\frac{1}{3}$$

Name: _____

Date: _____

**Homework- due next class
(front and back)**

1. How many thirds are there in 12?
a) 3
b) 6
c) 30
d) 36

2. Evaluate the expression:

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

- a) $\frac{1}{12}$
b) $\frac{1}{7}$
c) $\frac{3}{4}$
d) $\frac{4}{3}$

3. What is the reciprocal of $\frac{5}{6}$?

- a) $\frac{1}{5}$
b) $\frac{1}{6}$
c) $\frac{5}{6}$
d) $\frac{6}{5}$

4. Jenna has $\frac{7}{8}$ lb. of candy. She splits it equally between 3 friends. How much does each friend get?

- a) $\frac{7}{24}$ lb.
b) $2\frac{5}{8}$ lb.
c) $3\frac{3}{7}$ lb.
d) $3\frac{7}{8}$ lb.

Answer the question below. Be sure to show all of your work.

5. A rectangular mat has an area of $\frac{7}{12}$ in². The length of the mat is $\frac{5}{6}$ in. What is the width of the mat?

1) Show work

2) Reduce to lowest terms if needed.

Multiplying and Dividing Fractions (A)

Find the value of each expression in lowest terms.

1. $\frac{1}{2} \times \frac{5}{4}$

6. $\frac{1}{4} \times \frac{5}{3}$

11. $\frac{10}{3} \times \frac{11}{6}$

2. $\frac{1}{6} \div \frac{8}{11}$

7. $\frac{11}{2} \div \frac{1}{2}$

12. $\frac{1}{2} \div \frac{1}{2}$

3. $\frac{1}{3} \div \frac{13}{9}$

8. $\frac{4}{3} \div \frac{11}{12}$

13. $\frac{14}{9} \times \frac{7}{10}$

4. $\frac{13}{4} \div \frac{1}{2}$

9. $\frac{1}{3} \times \frac{20}{9}$

14. $\frac{15}{8} \times \frac{7}{6}$

5. $\frac{17}{6} \div \frac{3}{5}$

10. $\frac{13}{7} \times \frac{14}{11}$

15. $\frac{3}{2} \div \frac{4}{9}$

Name _____