Name **Key**   Date _____ Pd ____

Multiplying & Dividing Fractions DAY TWO WS

To multiply a fraction by a fraction, multiply the numerators, and then multiply the denominators. Show your work and write your final answer in simplest fraction form to earn full credit.

1) $\frac{1}{4} \times \frac{1}{6} = \frac{1}{24}$

$\frac{1 \cdot 1}{4 \cdot 6} = \frac{1}{24}$

2) $\frac{2}{3} \times \frac{1}{6} = $ _____

$\frac{2 \cdot 1}{3 \cdot 6} = \frac{2}{18} \div 2 \boxed{\frac{1}{9}}$

3) $\frac{1}{2} \times \frac{1}{5} = \frac{1}{10}$

$\frac{1 \cdot 1}{2 \cdot 5} = \frac{1}{10}$

4) $\frac{5}{6} \times \frac{1}{8} = \frac{5}{48}$

$\frac{5 \cdot 1}{6 \cdot 8} = \frac{5}{48}$

5) $\frac{2}{9} \times \frac{1}{3} = \frac{2}{27}$

$\frac{2 \cdot 1}{9 \cdot 3} = \frac{2}{27}$

6) $\frac{3}{4} \times \frac{1}{6} = $ _____

$\frac{3 \cdot 1}{4 \cdot 6} = \frac{3}{24} \div 3 \boxed{\frac{1}{8}}$

7) $\frac{5}{8} \cdot \frac{4}{5} = $ _____

$\frac{\cancel{5} \cdot 4}{8 \cdot \cancel{5}} = \frac{4}{8} \div 4 = \boxed{\frac{1}{2}}$

or $\frac{20}{40} = \frac{2}{4} = \boxed{\frac{1}{2}}$

8) $\frac{2}{5} \cdot \frac{3}{56} = $ _____

$\frac{2 \cdot 3}{5 \cdot 56} = \frac{6}{280} \div 2 \boxed{\frac{3}{140}}$

9) $\frac{6}{7} \cdot \frac{2}{5} = $ _____

$\frac{6 \cdot 2}{7 \cdot 5} = \boxed{\frac{12}{35}}$

10) $\frac{5}{4} \cdot \frac{7}{52} = \frac{35}{208}$

$\frac{5 \cdot 7}{4 \cdot 52} = \boxed{\frac{35}{208}}$

11) $\frac{9}{10} \cdot \frac{3}{6} = \frac{9}{20}$

$\frac{9 \cdot 3}{10 \cdot 6} = \frac{27}{60} \div 3 \boxed{\frac{9}{20}}$

12) $\frac{11}{52} \cdot \frac{2}{5} = \frac{11}{130}$

$\frac{11 \cdot 2}{52 \cdot 5} = \frac{22}{260} \div 2 \boxed{\frac{11}{130}}$

Dividing Fractions
Answer each word problem and use correct units. Show all work to earn full credit.

1) Tess wants to make throw pillows for her couch. She has 6 yards of fabric. Each pillow uses $\frac{2}{3}$ yards of fabric. How many pillows can she make?

$$\frac{6}{\frac{2}{3}} = \frac{6}{1} \div \frac{2}{3} = \frac{6}{1} \cdot \frac{3}{2} = \frac{18}{2}$$

9 pillows

2) Zander is making individual desserts for a dinner party. He has $\frac{3}{4}$ cup of whipped cream, and he wants to put $\frac{2}{8}$ of a cup of whipped cream on each dessert. How many desserts can he make?

$$\frac{\frac{3}{4}}{\frac{2}{8}} = \frac{3}{4} \div \frac{2}{8} = \frac{3}{4} \cdot \frac{8}{2} = \frac{24}{8} = 3$$

3 desserts

3) Daniel is using apple juice to make juice pops. He has 3 cups of juice and each juice pop uses $\frac{1}{2}$ of a cup juice. How many juice pops can he make?

$$\frac{3}{\frac{1}{2}} = \frac{3}{1} \div \frac{1}{2} = \frac{3}{1} \cdot \frac{2}{1} = 6$$

6 juice pops

4) Katie feeds her car, Elmer $\frac{2}{3}$ cup of cat food each day. She buys a bag of cat food that contains 28 cups of dry food. How many days will that bag of cat food last Katie?

$$\frac{28}{\frac{2}{3}} = \frac{28}{1} \div \frac{2}{3}$$
$$= \frac{28}{1} \cdot \frac{3}{2} = \frac{84}{2} = 42$$

42 days

5) Lucas is making a wire sculpture for art class, for the sculpture, he needs to cut a wire into pieces that are each $\frac{1}{24}$ of a foot long. If the original wire is $\frac{3}{4}$ of a foot long, how many pieces will Lucas have?

$$\frac{\frac{3}{4}}{\frac{1}{24}} = \frac{3}{4} \div \frac{1}{24} = \frac{3}{4} \cdot \frac{24}{1}^6 = $$ **18 pieces**

6) Nina works at Sweet Smoothies. She uses $\frac{3}{4}$ of a cup of crushed ice in each smoothie. When Nina starts her shift, there are 24 cups of crushed ice in the ice maker. How many smoothies can she make with that ice?

$$\frac{24}{\frac{3}{4}} = \frac{24}{1} \div \frac{3}{4} = \frac{8\,24}{1} \cdot \frac{4}{8} = $$ **32 smoothies**

7) Dylan bought a half pound bag of sunflower seeds. If one serving of sunflower seeds is $\frac{1}{24}$ of a pound, how many servings are in the bag?

$$\frac{\frac{1}{2}}{\frac{1}{24}} = \frac{1}{2} \div \frac{1}{24} = \frac{1}{2} \cdot \frac{24}{1} = \frac{24}{2}$$

12 servings