Helping With Math

Multiplying Fractions with Whole Numbers

GRADE 4

Fraction is a mathematical term which means a part of something bigger. We often encounter fractions in our daily lives may it be in grocery shopping, meal preparation, money and a lot more. In this worksheet, you will be able to learn how to multiply fractions with whole numbers specifically, fractions with denominators 8, 10, 12, 100.

Hello! I am Hanna and welcome to HWM Bakeshop! Have a taste of our pastries.

FRACTION AND WHOLE NUMBER

Let's recall...

Numerator → $\dfrac{3}{8}$ × 4 = ?

Denominator

Whole Number

STEPS IN MULTIPLYING

STEP 1 — Multiply the numerators.

Note: You can write any whole number in the form of fraction. Always use 1 as the denominator.

$$\dfrac{3}{8} \times \dfrac{4}{1} = \dfrac{12}{?}$$

STEP 2 — Multiply the denominators.

$$\dfrac{3}{8} \times \dfrac{4}{1} = \dfrac{12}{8}$$

STEP 3 — Simplify if needed

$$\dfrac{12}{8} = 1\dfrac{1}{2}$$

EXAMPLES
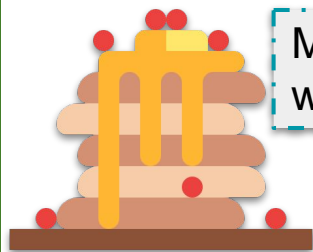
Multiply the following fractions with whole numbers.

1 $\dfrac{3}{10} \times 3$ > $\dfrac{3 \times 3}{10 \times 1} = \dfrac{9}{10}$

2 $\dfrac{5}{12} \times 2$ > $\dfrac{5 \times 2}{12 \times 1} = \dfrac{10}{12} = \dfrac{5}{6}$

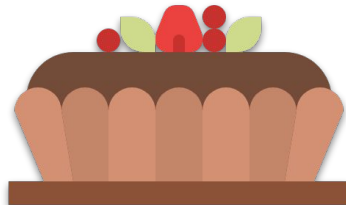**3** $\dfrac{7}{8} \times 5$ > $\dfrac{7 \times 5}{8 \times 1} = \dfrac{35}{8}$

REAL-LIFE APPLICATIONS

Jane wants to make 5 cupcakes. On each cupcake, she will be needing ⅝ cups of flour. How many cups of flour does she need in all to make 5 cupcakes.

Solution:

$\dfrac{5}{8} \times 5 \longrightarrow \dfrac{5 \times 5}{8 \times 1} = \dfrac{25}{8}$ cups

3 ⅛ cups

Mikee plans to bake 10 pieces of cheese bread. If each cheese bread requires 3/12 cups of shredded cheddar cheese, how many cups of cheese does she need?

Solution:

$\dfrac{3}{12} \times 10 \longrightarrow \dfrac{3 \times 10}{12 \times 1} = \dfrac{30}{12}$

$\dfrac{30}{12} = \dfrac{5}{2}$ cups   **2 ½ cups**

Determine the product of the following. Connect the dot of the correct answer and show your solution on the space provided.

1 $\dfrac{9}{8} \times 3$ →

● ● $\dfrac{5}{8}$

2 $\dfrac{9}{10} \times 2$ →

● ● 1

3 $\dfrac{1}{8} \times 5$ →

● ● $\dfrac{27}{8}$

4 $\dfrac{7}{12} \times 9$ →

● ● $\dfrac{21}{4}$

5 $\dfrac{2}{100} \times 50$ →

● ● $\dfrac{9}{5}$

TABLE OF ACTIVITIES

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6. Lots A Pizza
7. Bake A Cake
8. Cookies For All
9. Cupcakes For Janna
10. Free Pastries

HANNA THE BAKER

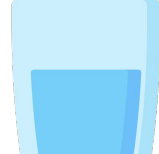Help Hanna the Baker to identify the right ingredients of the croissant bread that she will make by identifying whether the statement is true or false. Check "true" if the statement is correct otherwise check "false". Justify your answer on the space provided.

Statement	True or False	Reason
1.) The product of 3/100 and 9 is 36/25	**true** **false**	
2.) The product of 5/12 and 12 is 5	**true** **false**	
3.) The product of 3/10 and 16 is 24/5	**true** **false**	
4.) The answer is 5 when we multiply ⅝ by 9.	**true** **false**	
5.) The answer is 22/3 when we multiply 8/12 by 11.	**true** **false**	

CAKE DECORATING

Kiana has a poor eyesight. She's having a hard time picking up the letters that she will use in decorating her cakes. Help her find the letters she need by answering the following. Choose the letter that corresponds to your answer. Write the letters on the space provided below. Show your solution.

1.) $\dfrac{13}{10} \times 5$

2.) $\dfrac{7}{8} \times 2$

3.) $\dfrac{3}{12} \times 9$

4.) $\dfrac{16}{100} \times 3$

5.) $\dfrac{8}{12} \times 4$

6.) $\dfrac{7}{8} \times 3$

7.) $\dfrac{3}{8} \times 5$

8.) $\dfrac{16}{100} \times 8$

9.) $\dfrac{5}{10} \times 3$

$\dfrac{7}{4}$ **A**	$\dfrac{15}{8}$ **F**	$\dfrac{3}{16}$ **E**	$\dfrac{3}{2}$ **N**
$\dfrac{21}{8}$ **S**	$\dfrac{15}{9}$ **W**	$\dfrac{8}{3}$ **I**	$\dfrac{9}{4}$ **T**
$\dfrac{12}{25}$ **H**	$\dfrac{13}{2}$ **M**	$\dfrac{32}{25}$ **U**	$\dfrac{30}{12}$ **R**

___ ___ ___ ___   ___ ___   ___ ___ ___
 1   2   3   4   5   6   7   8   9

DELICIOUS PASTRIES

Help your mom choose the pastries that she will buy for the family. Answer the following problems correctly. Encircle the letter of the correct answer and show your solution.

1.) $\frac{13}{8}$ x 2

Solution:

a. $\frac{16}{8}$ b. $\frac{13}{2}$ c. $\frac{13}{4}$ d. $\frac{5}{2}$

2.) $\frac{3}{8}$ x 12

Solution:

a. $\frac{9}{2}$ b. $\frac{5}{8}$ c. $\frac{7}{4}$ d. $\frac{1}{8}$

3.) $\frac{3}{10}$ x 6

Solution:

a. $\frac{5}{2}$ b. $\frac{7}{8}$ c. $\frac{5}{4}$ d. $\frac{9}{5}$
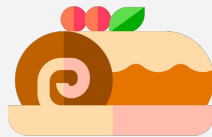
4.) $\frac{9}{10}$ x 5

Solution:

a. $\frac{9}{2}$ b. $\frac{13}{8}$ c. $\frac{11}{4}$ d. $\frac{3}{8}$

5.) $\frac{5}{12}$ x 4

Solution:

a. $\frac{7}{2}$ b. $\frac{5}{3}$ c. $\frac{6}{4}$ d. $\frac{3}{5}$

6.) $\frac{3}{100}$ x 12

Solution:

a. $\frac{3}{2}$ b. $\frac{26}{8}$ c. $\frac{9}{25}$ d. $\frac{4}{5}$

BAKING CLASS

Rico will be having a practical exam in his baking class. Help him practice by answering the following. Write a number inside the box that will make the equation correct. Show your solution on the space provided.
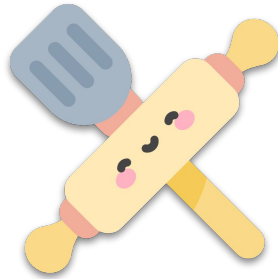
$\dfrac{16}{100} \times \square = \dfrac{32}{100}$

Solution:

$\dfrac{4}{10} \times \square = \dfrac{36}{10}$

Solution:

$\dfrac{\square}{8} \times 7 = \dfrac{35}{8}$

Solution:

$\dfrac{\square}{8} \times 6 = \dfrac{24}{8}$

Solution:

$\dfrac{\square}{10} \times 8 = \dfrac{48}{10}$

Solution:

$\dfrac{5}{12} \times 6 = \dfrac{\square}{12}$

Solution:

BAKING TOOLS

Paula will open a bakeshop in a few weeks. In preparation, she needs to buy new baking tools. Help her choose good quality tools by choosing the correct answer below. Draw the tool that corresponds to your answer. Show your solution on the space provided.

tools

solution

1.) $\frac{5}{8} \times 4$

2.) $\frac{9}{10} \times 5$

3.) $\frac{6}{12} \times 3$

4.) $\frac{20}{100} \times 4$

$\frac{9}{2}$

$\frac{4}{5}$

$\frac{5}{2}$

$\frac{3}{2}$
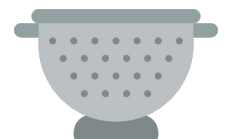
LOTS A PIZZA

Myrna will be giving away some pizzas that she made herself. Help her slice the pizzas by answering the following. Number 1 serves as an example.

1.)
$$\frac{3}{8} \times 3 \rightarrow \frac{3 \times 3}{8 \times 1} = \frac{9}{8}$$
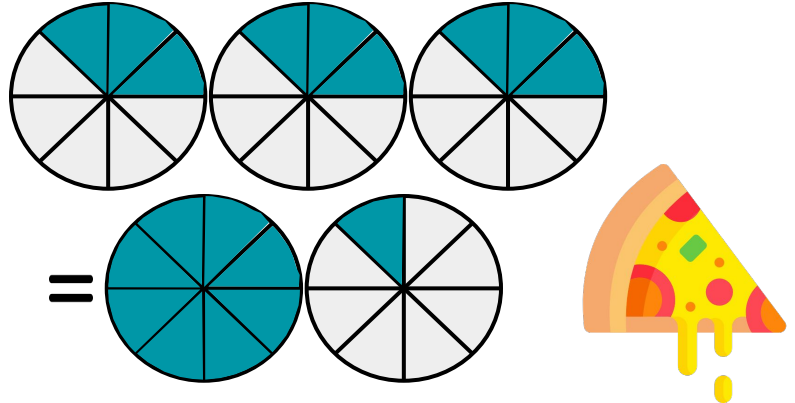
2.)
$$\frac{1}{8} \times 2 \rightarrow$$

3.)
$$\frac{2}{8} \times 3 \rightarrow$$
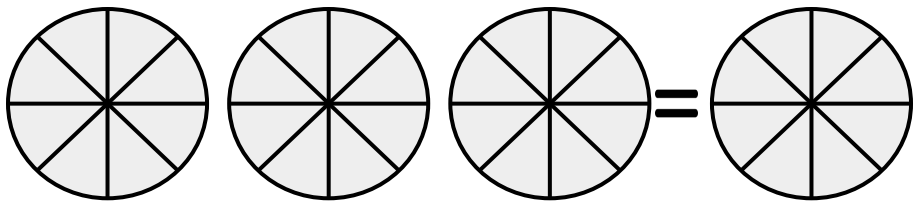
4.)
$$\frac{1}{8} \times 3 \rightarrow$$
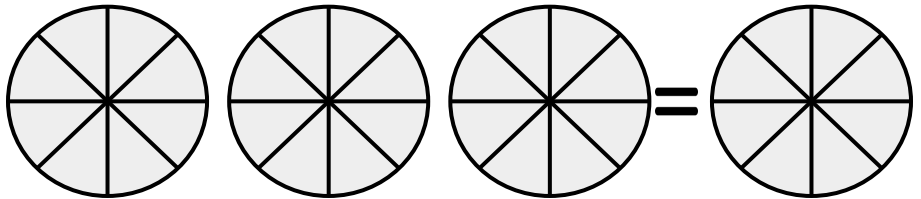
5.)
$$\frac{2}{8} \times 2 \rightarrow$$
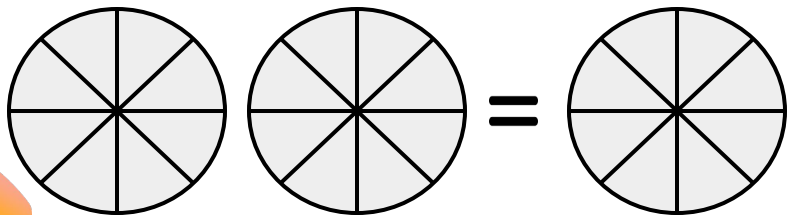
BAKE A CAKE

Rea needs some help in baking tons of cakes. Help her by answering the following word problems.

1.) Emma can make 5/12 of a cake in one hour. How much of the cake can she make in 2 hours.

2.) It takes one week to build 3/10 of a bakeshop. How much of the bakeshop will be done after 3 weeks.

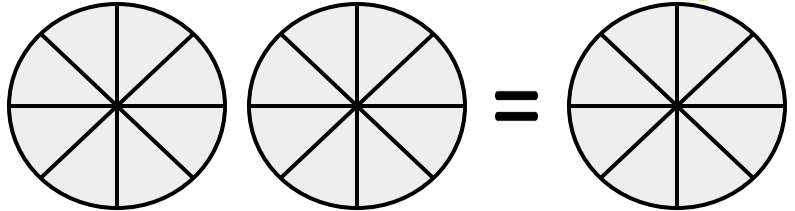3.) It takes 1 hour for Ann to clean ⅜ of her bakeshop. What fraction of the of the bakeshop can she clean in 2 hours.

4.) Jen uses 7/12 of a box of butter in making 1 tray of bread. What fraction of the box of butter will she use in making 3 trays of bread?

5.) Your mom will make some pizzas for your birthday party. You are expecting 20 visitors and each of them will eat 1/12 of the pizza. How many pizza should your mom make?

COOKIES FOR ALL

Oh no! There's a lot of customers. Help me sell baked cookies by answering the following problems. Show your solution on the space provided.

1.) Anna will bake some cookies. If each dozen of cookies requires 75/100 of a bag of flour, how many bags of flour Anna will need in making 5 dozen of cookies?

2.) To make some cheese breads, Lina will be needing 1/10 cup of cheese for each cheese bread. If she will make 20 cheese breads, how many cups of cheese does she need.?

3.) Myka spends 35/8 hours working in a bakery each day. How many hours does she spend working in the bakery in 5 days?

4.) Julia uses 3/10 of an apple to make an apple pie. How many apple should she buy to make 5 apple pies?

5.)Sheila has 9 bottles of milk in stock that she uses for baking. If each bottle is 90/100 filled, how many bottles filled with milk does Sheila has in stock?
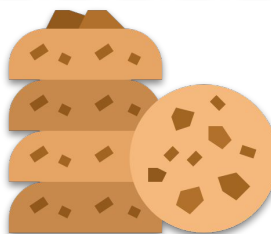
CUPCAKES FOR JANNA

It's Janna's birthday today. Make her some cupcakes. Start preparing the ingredients by answering the following problems.

1.) Bea made 2/8 tray of banana bread in 1 hour while Arianne made 3/10 tray of banana bread in 2 hours. Who made more banana bread in total?

2.) Joana sold 3 boxes of buko pies while Fina sold ⅜ as many boxes of buko pies as Joana did. How many boxes of buko pies did Fina sell?

3.) Mia cleaned the bakeshop for two hours. After 1 week, Ara cleaned the same bakeshop for ⅞ as long as Mia did. How many hours did Ara spend cleaning the bakeshop?

4.) Carl bought 4 dozen of baguette for his brother's birthday. Gina also bought 8/12 as many dozen of baguette as Carl bought. How many dozen did Gina buy?

5.) Hanna will make some doughs that are 7/10 of an inch thick when flattened. If she makes 5 flattened doughs, what is the thickness of dough will she make in total?
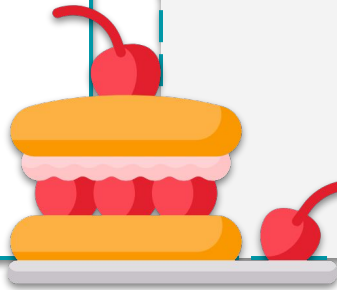
FREE PASTRIES

Shayne will be giving away pastries for free if you answer the following. Give 6 pairs of a fraction and a whole number that when multiplied will result to the following fractions.

1.)   25/12

2.) 9/10

3.) 5/12

4.) 55/100

5.) 18/12

6.) 9/12

ANSWER GUIDE

ACTIVITY 1

1.) false

$$\frac{3}{100} \times 9 \longrightarrow \frac{3 \times 9}{100 \times 1} = \frac{27}{100}$$

2.) true

$$\frac{5}{12} \times 12 \longrightarrow \frac{5 \times 12}{12 \times 1} = \frac{60}{12} = 5$$

3.) true

$$\frac{3}{10} \times 16 \longrightarrow \frac{3 \times 16}{10 \times 1} = \frac{48}{10} = \frac{24}{5}$$

4.) false

$$\frac{5}{8} \times 9 \longrightarrow \frac{5 \times 9}{8 \times 1} = \frac{45}{8}$$

5.) true

$$\frac{8}{12} \times 11 \longrightarrow \frac{8 \times 11}{12 \times 1} = \frac{88}{12} = \frac{22}{3}$$

ACTIVITY 2

1.) $\frac{13}{10} \times 5 \longrightarrow \frac{13 \times 5}{10 \times 1} = \frac{65}{10} = \frac{13}{2}$ **M**

2.) $\frac{7}{8} \times 2 \longrightarrow \frac{7 \times 2}{8 \times 1} = \frac{14}{8} = \frac{7}{4}$ **A**

3.) $\frac{3}{12} \times 9 \longrightarrow \frac{3 \times 9}{12 \times 1} = \frac{27}{12} = \frac{9}{4}$ **T**

4.) $\frac{16}{100} \times 3 \longrightarrow \frac{16 \times 3}{100 \times 1} = \frac{48}{100} = \frac{12}{25}$ **H**

5.) $\frac{8}{12} \times 4 \longrightarrow \frac{8 \times 4}{12 \times 1} = \frac{32}{12} = \frac{8}{3}$ **I**

6.) $\frac{7}{8} \times 3 \longrightarrow \frac{7 \times 3}{8 \times 1} = \frac{21}{8}$ **S**

7.) $\frac{3}{8} \times 5 \longrightarrow \frac{3 \times 5}{8 \times 1} = \frac{15}{8}$ **F**

8.) $\frac{16}{100} \times 8 \longrightarrow \frac{16 \times 8}{100 \times 1} = \frac{128}{100} = \frac{32}{25}$ **U**

9.) $\frac{5}{10} \times 3 \longrightarrow \frac{5 \times 3}{10 \times 1} = \frac{15}{10} = \frac{3}{2}$ **N**

ACTIVITY 3

1.) c; $\frac{13}{8} \times 2 \longrightarrow \frac{13 \times 2}{8 \times 1} = \frac{26}{8} = \frac{13}{4}$

2.) a; $\frac{3}{8} \times 12 \longrightarrow \frac{3 \times 12}{8 \times 1} = \frac{36}{8} = \frac{9}{2}$

3.) d; $\frac{3}{10} \times 6 \longrightarrow \frac{3 \times 6}{10 \times 1} = \frac{18}{10} = \frac{9}{5}$

4.) a; $\frac{9}{10} \times 5 \longrightarrow \frac{9 \times 5}{10 \times 1} = \frac{45}{10} = \frac{9}{2}$

ANSWER GUIDE

5.) b; $\dfrac{5}{12} \times 4 \rightarrow \dfrac{5 \times 4}{12 \times 1} = \dfrac{20}{12} = \dfrac{5}{3}$

6.) c; $\dfrac{3}{100} \times 12 \rightarrow \dfrac{3 \times 12}{100 \times 1} = \dfrac{36}{100} = \dfrac{9}{25}$

ACTIVITY 4

1.) 9; $\dfrac{4}{10} \times 9 \rightarrow \dfrac{4 \times 9}{10 \times 1} = \dfrac{36}{10}$

2.) 4; $\dfrac{4}{8} \times 6 \rightarrow \dfrac{4 \times 6}{8 \times 1} = \dfrac{24}{8}$

3.) 30; $\dfrac{5}{12} \times 6 \rightarrow \dfrac{5 \times 6}{12 \times 1} = \dfrac{30}{12}$

4.) 2; $\dfrac{16}{100} \times 2 \rightarrow \dfrac{16 \times 2}{100 \times 1} = \dfrac{32}{100}$

5.) 5; $\dfrac{5}{8} \times 7 \rightarrow \dfrac{5 \times 7}{8 \times 1} = \dfrac{35}{8}$

6.) 6; $\dfrac{6}{10} \times 8 \rightarrow \dfrac{6 \times 8}{10 \times 1} = \dfrac{48}{10}$

ACTIVITY 5

1.) $\dfrac{5}{8} \times 4 \rightarrow \dfrac{5 \times 4}{8 \times 1} = \dfrac{20}{8} = \dfrac{5}{2}$

2.) $\dfrac{9}{10} \times 5 \rightarrow \dfrac{9 \times 5}{10 \times 1} = \dfrac{45}{10} = \dfrac{9}{2}$

3.) $\dfrac{6}{12} \times 3 \rightarrow \dfrac{6 \times 3}{12 \times 1} = \dfrac{18}{12} = \dfrac{3}{2}$

4.) $\dfrac{20}{100} \times 4 \rightarrow \dfrac{20 \times 4}{100 \times 1} = \dfrac{80}{100} = \dfrac{4}{5}$

Multiplying Fractions with Whole Numbers with Word Problems (with denominators 8, 10, 12, 100)

ANSWER GUIDE

ACTIVITY 6

2.) $\dfrac{1}{8} \times 2 \rightarrow \dfrac{1 \times 2}{8 \times 1} = \dfrac{2}{8}$

3.) $\dfrac{2}{8} \times 3 \rightarrow \dfrac{2 \times 3}{8 \times 1} = \dfrac{6}{8}$

4.) $\dfrac{1}{8} \times 3 \rightarrow \dfrac{1 \times 3}{8 \times 1} = \dfrac{3}{8}$

5.) $\dfrac{2}{8} \times 2 \rightarrow \dfrac{2 \times 2}{8 \times 1} = \dfrac{4}{8}$
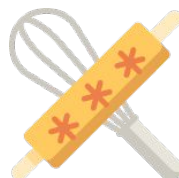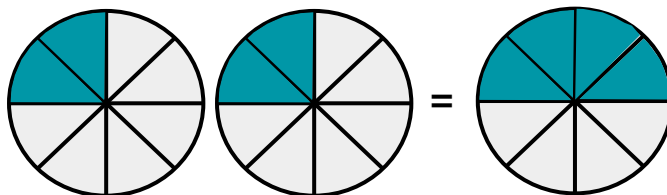
ACTIVITY 7

1.) $\dfrac{5}{12} \times 2 \rightarrow \dfrac{5 \times 2}{12 \times 1} = \dfrac{10}{12} = \dfrac{5}{6}$

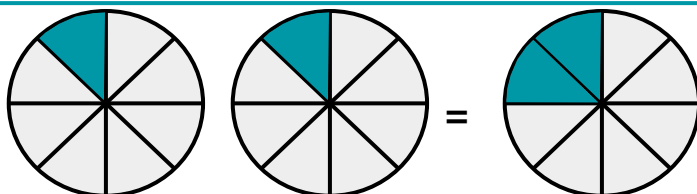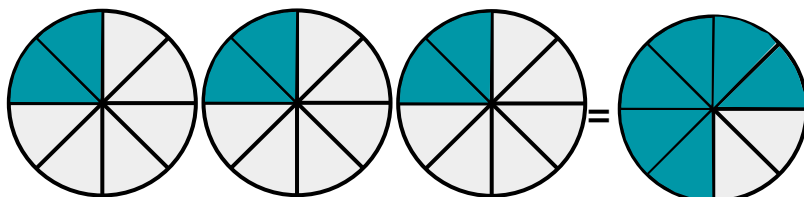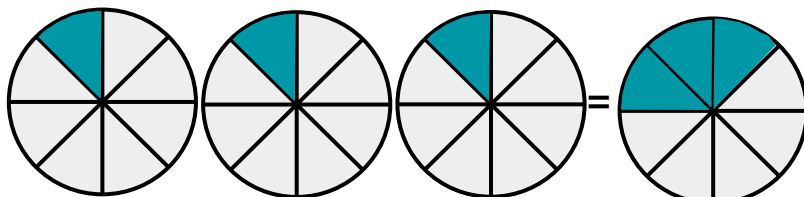2.) $\dfrac{3}{10} \times 3 \rightarrow \dfrac{3 \times 3}{10 \times 1} = \dfrac{9}{10}$

3.) $\dfrac{3}{8} \times 2 \rightarrow \dfrac{3 \times 2}{8 \times 1} = \dfrac{6}{8} = \dfrac{3}{4}$

4.) $\dfrac{7}{12} \times 3 \rightarrow \dfrac{7 \times 3}{12 \times 1} = \dfrac{21}{12}$

5.) $\dfrac{1}{12} \times 20 \rightarrow \dfrac{1 \times 20}{12 \times 1} = \dfrac{20}{12}$

$= \dfrac{5}{3}$ pizzas

Multiplying Fractions with Whole Numbers with Word Problems (with denominators 8, 10, 12, 100)

ANSWER GUIDE

ACTIVITY 8

1.) $\dfrac{75}{100} \times 5 \rightarrow \dfrac{75 \times 5}{100 \times 1} = \dfrac{375}{100}$

$= \dfrac{15}{4}$ Bags of flour

2.) $\dfrac{1}{10} \times 20 \rightarrow \dfrac{1 \times 20}{10 \times 1} = \dfrac{20}{10} = 2$ cups

3.) $\dfrac{35}{8} \times 5 \rightarrow \dfrac{35 \times 5}{8 \times 1} = \dfrac{175}{8}$ hours

4.) $\dfrac{3}{10} \times 5 \rightarrow \dfrac{3 \times 5}{10 \times 1} = \dfrac{15}{10} = \dfrac{3}{2}$ apples

5.) $\dfrac{90}{100} \times 9 \rightarrow \dfrac{90 \times 9}{100 \times 1} = \dfrac{810}{100} = \dfrac{81}{10}$ bottles

ACTIVITY 9

1.) Bea: $\dfrac{2}{8} \times 1 \rightarrow \dfrac{2 \times 1}{8 \times 1} = \dfrac{2}{8} = \dfrac{1}{4}$

Arianne: $\dfrac{3}{10} \times 2 \rightarrow \dfrac{3 \times 2}{10 \times 1} = \dfrac{6}{10} = \dfrac{3}{5}$

Therefore, Arianne made more banana bread than Bea

2.) $\dfrac{3}{8} \times 3 \rightarrow \dfrac{3 \times 3}{8 \times 1} = \dfrac{9}{8}$ boxes

3.) $\dfrac{7}{8} \times 2 \rightarrow \dfrac{7 \times 2}{8 \times 1} = \dfrac{14}{8}$ hours

4.) $\dfrac{8}{12} \times 4 \rightarrow \dfrac{8 \times 4}{12 \times 1} = \dfrac{32}{12}$ dozen

5.) $\dfrac{7}{10} \times 5 \rightarrow \dfrac{7 \times 5}{10 \times 1} = \dfrac{35}{10}$ inches

ACTIVITY 10

Learner's answers may vary.

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