LESSON MAKER PRO

Montana Math Paths

Multiply fractions and mixed numbers in everyday situations

GRADE 5 · MT.5.NF.6

MT.5.NF.6 "Solve problems in context that involve multiplication of fractions and mixed numbers. This standard should incorporate cultural context relating to Montana Indigenous Peoples and local communities."

NAME _____ DATE _____

FIND A PART

To find a fraction of an amount, multiply. Change any mixed number to a fraction, multiply the top numbers and bottom numbers, then simplify.

WORKED EXAMPLE

A ribbon is 1 3/4 yards long. You use 2/3 of it. How many yards do you use?

1. Change 1 3/4 to 7/4.
2. Multiply: 7/4 × 2/3 = 14/12.
3. Simplify: 14/12 = 1 1/6.

Answer: 1 1/6 yards

PRACTICE 6 problems

1 A class uses 3/4 of a 2-foot strip of paper for a banner. How many feet of paper do they use?

ANSWER _____

2 Each bracelet needs 3/8 yard of string. How many yards of string do 4 bracelets need?

ANSWER _____

3 A garden row is 3 1/2 yards long. Beans cover 4/7 of the row. How many yards do the beans cover?

ANSWER _____

4 A recipe uses 1 1/2 cups of oats per batch. How many cups of oats do you need for 2 1/3 batches?

ANSWER _____

5 A class decorates 5/6 of a 3/5-yard ribbon. How many yards of ribbon do they decorate?

ANSWER _____

6 A sack holds 1 2/3 pounds of seed. How many pounds of seed are in 1 1/2 sacks?

ANSWER _____

APPLY IT Show your work

1 At a school garden on the Flathead Reservation, home to the Confederated Salish and Kootenai Tribes, a row is 2 1/2 yards long. Students plant carrots in 3/5 of the row. How many yards of the row have carrots?

WORK SPACE

ANSWER _____

2 At a youth bike club in Browning on the Blackfeet Reservation, a trail loop is 2 1/4 miles long. A rider bikes 1 2/3 loops. How many miles does the rider bike?

WORK SPACE

ANSWER _____

CHALLENGE One step up

At a community book fair, volunteers have 4 1/2 yards of ribbon. They use 2/3 of it for bookmarks and 1/6 of it for signs. How many yards of ribbon remain? Show your multiplication and subtraction.

WORK SPACE AND ANSWER

Montana Math Paths

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A class uses 3/4 of a 2-foot strip of paper for a banner. How many feet of paper do they use?	**1 1/2 feet**
2	Each bracelet needs 3/8 yard of string. How many yards of string do 4 bracelets need?	**1 1/2 yards**
3	A garden row is 3 1/2 yards long. Beans cover 4/7 of the row. How many yards do the beans cover?	**2 yards**
4	A recipe uses 1 1/2 cups of oats per batch. How many cups of oats do you need for 2 1/3 batches?	**3 1/2 cups**
5	A class decorates 5/6 of a 3/5-yard ribbon. How many yards of ribbon do they decorate?	**1/2 yard**
6	A sack holds 1 2/3 pounds of seed. How many pounds of seed are in 1 1/2 sacks?	**2 1/2 pounds**

PART 2 · APPLY IT

1. **1 1/2 yards** Multiply 5/2 × 3/5 = 15/10 = 1 1/2 yards.
2. **3 3/4 miles** Multiply 9/4 × 5/3 = 45/12 = 3 3/4 miles.

CHALLENGE

4 1/2 × 2/3 = 3 yards, and 4 1/2 × 1/6 = 3/4 yard. Then 4 1/2 − 3 − 3/4 = 3/4 yard remains.

Accept equivalent fractions or decimals when the value and unit are correct. For the challenge, students may add the fractions used before multiplying, then subtract from the total.