A sloth spends $22\frac{}{5}$ years of its life asleep.

Guided Practice

Check

Multiply. Write in simplest form. (Examples 1–3)

1. $10 \times \frac{4}{5} =$ **8**

Show your work.

2. $2 \times \frac{3}{4} =$ **$\frac{3}{2}$ or $1\frac{1}{2}$**

3. $\frac{3}{8} \times 11 =$ **$\frac{33}{8}$ or $4\frac{1}{8}$**

4. $\frac{3}{7} \times 9 =$ **$\frac{27}{7}$ or $3\frac{6}{7}$**

5. A cat spends $\frac{2}{3}$ of its life asleep. If a cat lives to be 15 years old, how many years did it spend asleep? (Example 4) **10 yr**

6. **Building on the Essential Question** How is the process used to multiply a fraction and a whole number similar to the process used to multiply two whole numbers?

Sample answer: The order in which

Rate Yourself!

Are you ready to move on?
Shade the section that applies.

YES ? NO

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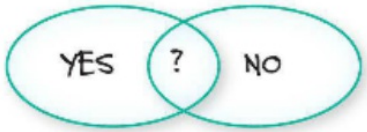
6. **Building on the Essential Question** How is the process used to multiply a fraction and a whole number similar to the process used to multiply two whole numbers?

Sample answer: The order in which any two numbers are multiplied does not matter. Multiply the numerators, and then multiply the denominators the same way you multiply whole numbers.

Rate Yourself!

Are you ready to move on? Shade the section that applies.



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Tutor

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Name _____ My Homework _____

Independent Practice

Go online for Step-by-Step Solutions eHelp

Multiply. Write in simplest form. (Examples 1–3)

1. $20 \times \frac{3}{4} =$ **15**

2. $14 \times \frac{2}{7} =$ **4**

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

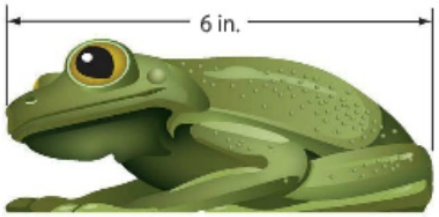
Show your work.

4. $\frac{3}{4} \times 6 =$ **$\frac{9}{2}$ or $4\frac{1}{2}$**

5. $\frac{2}{5} \times 11 =$ **$\frac{22}{5}$ or $4\frac{2}{5}$**

6. $\frac{1}{4} \times 6 =$ **$\frac{3}{2}$ or $1\frac{1}{2}$**

7. STEM The male Cuban tree frog is about $\frac{2}{5}$ the size of the female Cuban tree frog. The average size of the female Cuban tree frog is shown at the right. What is the size of the male Cuban tree frog? (Example 4) **$2\frac{2}{5}$ in.**



8. The Mississippi River is the second longest river in the United States, second only to the Miss… $\frac{23}{25}$ the

7 **STEM** The male Cuban tree frog is about $\frac{2}{5}$ the size of the female Cuban tree frog. The average size of the female Cuban tree frog is shown at the right. What is the size of the male Cuban tree frog? (Example 4)

2 $\frac{2}{5}$ in.

8. The Mississippi River is the second longest river in the United States, second only to the Missouri River. The Mississippi River is about $\frac{23}{25}$ the length of the Missouri River. If the Missouri River is 2,540 miles long, how long is the Mississippi River? (Example 4)

2,336 $\frac{4}{5}$ mi

9 One evening, $\frac{2}{3}$ of Mrs. Thorne's students watched a reality television show. Of Mrs. Lombardo's students, $\frac{4}{5}$ watched the same reality show. Which teacher had more students that watched the reality show? Explain.

neither; $\frac{4}{5} \times 30 = 24$ and $\frac{2}{3} \times 36 = 24$. So, $24 = 24$.

Teacher	Number of Students
Mrs. Thorne	36
Mrs. Lombardo	30
Mr. Hollern	28

10. CCSS **Persevere with Problems** The table shows where sixth grade students at Sharonton Middle School attended fifth grade. There are 156 sixth grade students. How many more students attended Sharonton Elementary than Deacon Elementary?

39 students

School	Fraction of Students
Sharonton Elementary	$\frac{1}{2}$
Deacon Elementary	$\frac{1}{4}$
Banyon Elementary	$\frac{1}{6}$
New Students	$\frac{1}{12}$

11. **Persevere with Problems** Students at Marzo Middle School were recently surveyed. The results reported $\frac{1}{4}$ of sixth grade students, $\frac{3}{10}$ of seventh grade students, and $\frac{2}{7}$ of eighth grade students plan a career in STEM. In which grade do the most students plan to have careers in STEM?

seventh grade

Grade	Total Students
6	152
7	160
8	147

12. **Persevere with Problems** Refer to the table in Exercise 11. Suppose in the sixth grade, $\frac{3}{4}$ of the students want a career in either teaching or STEM. How many sixth grade students did not choose a career in teaching or STEM?

38 students

H.O.T. Problems Higher Order Thinking

13. **Identify Structure** Write a real-world problem involving the multiplication of a fraction and a whole number with a product that is between 8 and 10. Then solve the problem.

Sample answer: Melinda baked a dozen cookies. Three-fourths of the cookies were oatmeal raisin. How many cookies were oatmeal raisin cookies?; $\frac{3}{4} \times 12 = 9$; 9 cookies

14. **Find the Error** Noah is finding $\frac{3}{8}$ of 8. Find his mistake and correct it.

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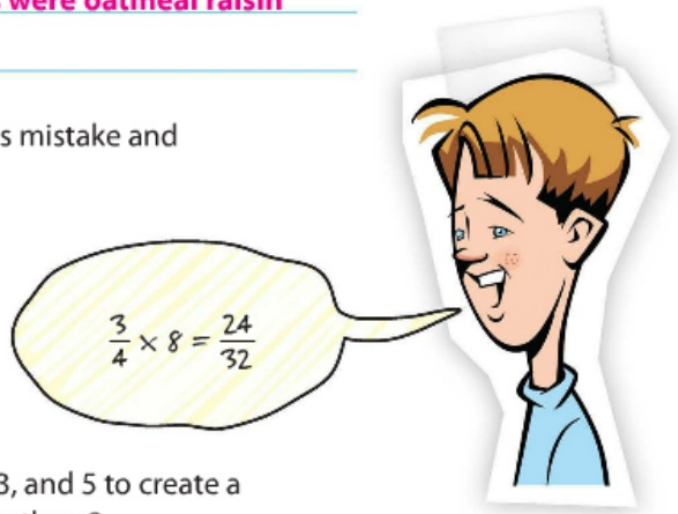
14. **Find the Error** Noah is finding $\frac{3}{4}$ of 8. Find his mistake and correct it.

He multiplied by $\frac{8}{8}$ instead of multiplying by $\frac{8}{1}$.

$\frac{3}{4} \times \frac{8}{1} = \frac{24}{4}$ or 6.



15. **Persevere with Problems** Use the digits 2, 3, and 5 to create a fraction and a whole number with a product greater than 2.

Sample answer: $\frac{5}{3} \times 2$

16. **Reason Inductively** Jenny made five loaves of banana bread that had $\frac{1}{4}$ cup of oil in each loaf. After she was done baking, she had $\frac{5}{8}$ cup of oil remaining. How much oil did she have before baking? **$1\frac{7}{8}$ c**