

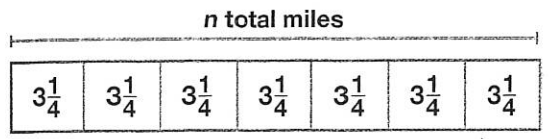
KEY

Name _____

1. What is the area of a rectangle with length $\frac{1}{12}$ foot and width $\frac{3}{4}$ foot?
- A $\frac{1}{16}$ sq ft
 B $\frac{1}{12}$ sq ft
 C $\frac{2}{3}$ sq ft
 D $\frac{5}{6}$ sq ft

$$\frac{1 \times 3}{12 \times 4} = \frac{1}{16}$$

2. Alberto runs $3\frac{1}{4}$ miles each day for 7 days.



Part A

Write an equation using the variable n to model how far he runs.

$$7 \times 3\frac{1}{4} = n$$

Part B

How many miles in all does he run?

$$7 \times 3 = 21 \quad 21 + 1\frac{3}{4} = 22\frac{3}{4}$$

$$7 \times \frac{7}{4} = \frac{49}{4} = 12\frac{1}{4}$$

3. Draw lines to match each expression on the left with the correct product on the right.

$\frac{5}{8} \times \frac{7}{6}$	}	$\frac{48}{35}$
$\frac{5}{7} \times \frac{8}{6}$		$\frac{40}{42}$
$\frac{8}{5} \times \frac{7}{6}$		$\frac{35}{48}$
$\frac{8}{5} \times \frac{6}{7}$		$\frac{56}{30}$

4. For questions 4a–4d, choose Yes or No to tell if the number $\frac{3}{4}$ will make each equation true.

- 4a. $12 \times \frac{3}{4} = 9$ Yes No
 4b. $18 \times \frac{3}{4} = 12\frac{1}{2}$ Yes No
 4c. $15 \times \frac{3}{4} = 10\frac{1}{4}$ Yes No
 4d. $20 \times \frac{3}{4} = 15$ Yes No

5. Choose all the expressions that are equal to $\frac{4}{7} \times 6$.

- $4 \div 6 \times 7 = \frac{4}{6} \times 7$ (NO)
 $\frac{6}{7} \times 4 = \frac{6 \times 4}{7} = 6 \times \frac{4}{7}$
 $6 \div 4 \times 7 = \frac{6}{4} \times 7$ (NO)
 $4 \times 6 \div 7 = 4 \times \frac{6}{7}$
 $7 \div 4 \times 6 = \frac{7}{4} \times 6$ (NO)

6. Tracy took a test that had 24 questions. She got $\frac{5}{6}$ of the questions correct. How many questions did she answer correctly? Write an equation to model your work.

$$\frac{5}{6} \times 24 = 20$$

20 correct

7. Mary is making a window covering that has 5 sections, each of which is $1\frac{3}{10}$ feet in width. What is the width of the entire window covering?

- A $6\frac{1}{2}$ feet
- B $5\frac{1}{2}$ feet
- C $5\frac{3}{10}$ feet
- D $3\frac{11}{13}$ feet

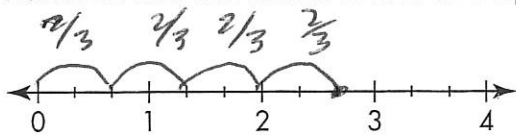
$$5 \times 1\frac{3}{10}$$

$$5 \times 1 = 5$$

$$5 \times \frac{3}{10} = \frac{15}{10} = \frac{15}{10}$$

$$5 + \frac{15}{10} = 6\frac{15}{10} = 6\frac{1}{2}$$

8. Eduardo has a recipe that uses $\frac{2}{3}$ cup of flour for each batch. If he makes 4 batches, how many cups of flour will he need? Write your answer as a mixed number. Use the number line to help.



$$4 \times \frac{2}{3} = \frac{8}{3} = 2\frac{2}{3}$$

9. For questions 9a–9d, choose Yes or No to tell if the number $\frac{2}{3}$ will make each equation true.

- 9a. $\frac{2}{3} \times \frac{3}{4} = \frac{1}{4} = \frac{2}{3}$ Yes No
- 9b. $\frac{2}{2} \times \frac{5}{6} = \frac{10}{18}$ Yes No
- 9c. $\frac{2}{3} \times \frac{2}{3} = \frac{4}{6} = \frac{4}{3}$ Yes No
- 9d. $\frac{2}{3} \times \frac{3}{8} = \frac{1}{4} = \frac{2}{8}$ Yes No

10. Ted and his friends are rolling out clay for art class. Ted rolled out his clay until it was 2 feet long. Noah rolled out his clay $\frac{3}{5}$ as long as Ted's clay. Jeannine rolled out her clay until it was $1\frac{1}{2}$ times as long as Ted's clay. Miles rolled out his clay $\frac{5}{5}$ as long as Ted's clay.

Part A

Without completing the multiplication, whose clay is longer than Ted's clay? How can you tell? 2 ft.

Jeannine

$$2 \times 1\frac{1}{2} > 2$$

Part B

Without completing the multiplication, whose clay is shorter than Ted's clay? How can you tell?

Noah

$$2 \times \frac{3}{5} < 2$$

Part C

Whose clay is the same length as Ted's clay? How can you tell?

Miles

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

11. Choose all the expressions that are equal to $\frac{7}{8} \times \frac{9}{10}$.

$\frac{7 \times 10}{8 \times 9} \frac{9}{10}$

$\frac{7 \times 9}{8 \times 10}$

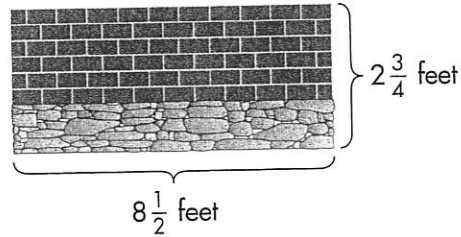
$\frac{7 \times 8}{9 \times 10}$

$\frac{63}{80} = \frac{7 \times 9}{8 \times 10}$

$\frac{8 \times 9}{7 \times 10}$

14. Members of a landscaping company built a retaining wall. They used brick to make the top $\frac{2}{3}$ of the wall.

Assessment
Continued



12. Draw lines to match each expression on the left with the correct product on the right.

$\frac{3}{8} \times 5$	→	$\frac{24}{5}$
$\frac{3}{5} \times 8$	→	$\frac{40}{3}$
$\frac{5}{3} \times 8$	→	$\frac{30}{8}$
$\frac{6}{8} \times 5$	→	$\frac{15}{8}$

13. Which of the following is equal to $\frac{4}{7} \times \frac{11}{15}$?

- (A) $\frac{4 \times 7}{11 \times 15}$
- (B) $\frac{4 \times 15}{7 \times 11}$
- (C) $\frac{4 \times 11}{7 \times 15}$
- (D) $\frac{7 \times 15}{4 \times 11}$

Part A

What is the height of the brick portion of the wall? Write an equation to model your work.

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

$$\frac{2 \times 11}{3 \times 4} = \frac{22}{12} = \frac{11}{6}$$

Part B

Estimate the area of the whole retaining wall.

$$9 \times 3 = 27 \text{ sq ft}$$

Part C

What is the area of the whole retaining wall? Write an equation to show your work. Compare your answer to your estimate to see if your answer is reasonable.

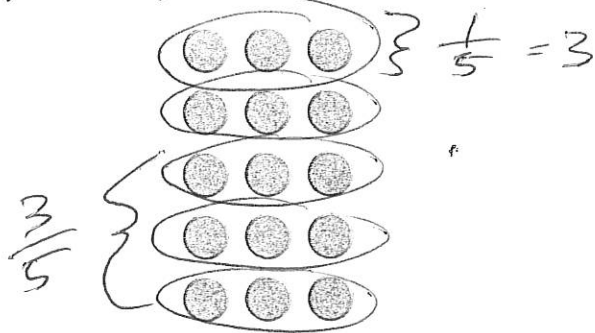
$$2\frac{3}{4} \times 8\frac{1}{2}$$

$$\frac{11 \times 17}{4 \times 2} = \frac{187}{8} = 23\frac{3}{8} \text{ sq ft}$$

$$8 \overline{) 187} \begin{array}{r} 23 \frac{3}{8} \\ \underline{16} \\ 27 \\ \underline{24} \\ 3 \end{array}$$

$$\begin{array}{r} 17 \\ \times 11 \\ \hline 17 \\ 170 \\ \hline 187 \end{array}$$

15. Tyler's family rented 15 DVDs last month.



Part A

Of the 15 DVDs, $\frac{1}{5}$ were documentaries. How many of the movies were documentaries? Use the model to help you.

$$\frac{1}{5} \text{ of } 15 \quad \frac{1}{5} \times \frac{15}{1} = \frac{15}{5} = 3$$

Part B

Of the 15 DVDs, $\frac{3}{5}$ were comedies. How many movies were comedies? Use the model to help you.

$$\text{If } \frac{1}{5} = 3$$

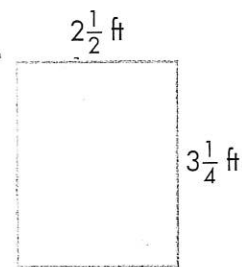
$$\frac{3}{5} = 3 \times 3 = 9$$

Part C

What relationship do you notice between the number of comedies and the number of documentaries?

There are 3 times as many comedies

16. Kristen and Niko buy a canvas for their art studio.



Part A

Estimate the area of their canvas. Write an equation to model your work.

$$2\frac{1}{2} \approx 3$$

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

$$3 \times 3 = 9$$

about 9 sq ft.

Part B

Find the actual area of their canvas. Write your answer as a mixed number.

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

$$\frac{5}{2} \times \frac{13}{4} = \frac{65}{8}$$

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

Part C

Compare your answer to your estimate to see if your answer is reasonable.

$8\frac{1}{8}$ is close to 9 so it is reasonable