NAME _____

Lesson 4 Expressing Products in Simplest Form

Study the two ways $\frac{6}{7}\times\frac{3}{4}$ is found in simplest form.

$$\frac{6}{7}\times\frac{3}{4}=\frac{6\times3}{7\times4}$$
$$=\frac{18}{28}$$
$$=\frac{18\div2}{28\div2}$$
$$=\_\_\_\_\_$$

$$\frac{6}{7}\times\frac{3}{4}=\frac{\overset{3}{\cancel{6}}\times3}{7\times\underset{2}{\cancel{4}}}$$
$$=\frac{3\times3}{7\times2}$$
$$=\_\_\_\_\_$$

Divide 6 (in the numerator) and 4 (in the denominator) by their greatest common factor, 2.

Write each answer in simplest form.

	a	*b*	*c*	*d*
1.	$\frac{4}{5}\times\frac{1}{2}$	$\frac{3}{8}\times\frac{2}{3}$	$\frac{3}{5}\times\frac{4}{9}$	$\frac{8}{9}\times\frac{7}{10}$
2.	$\frac{2}{3}\times\frac{5}{6}$	$\frac{7}{10}\times\frac{8}{9}$	$\frac{10}{11}\times\frac{7}{12}$	$\frac{5}{7}\times\frac{3}{10}$
3.	$\frac{7}{9}\times\frac{6}{11}$	$\frac{12}{13}\times\frac{3}{4}$	$\frac{10}{11}\times\frac{7}{15}$	$\frac{8}{9}\times\frac{5}{12}$
4.	$\frac{5}{8}\times\frac{2}{5}$	$\frac{9}{16}\times\frac{1}{6}$	$\frac{1}{2}\times\frac{8}{9}$	$\frac{4}{7}\times\frac{14}{15}$
5.	$\frac{3}{8}\times\frac{4}{5}$	$\frac{8}{9}\times\frac{6}{7}$	$\frac{4}{7}\times\frac{5}{6}$	$\frac{4}{15}\times\frac{12}{13}$

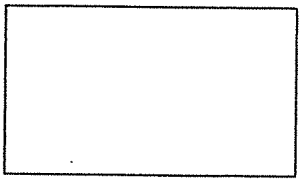
Perfect score: 20 My score: _____

Area and Perimeter

This problem gives you the chance to:
- work with area and perimeter of rectangles

1. The perimeter of this rectangle is $2(5 + 2) = 14$ inches.

   The area of this rectangle is $2 \times 5 = 10$ square inches.

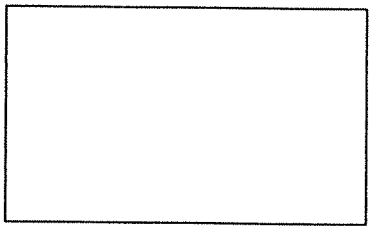


a. Draw a diagram of a rectangle with the same perimeter, but a larger area.
Write down the area of your rectangle.

b. Draw a diagram of a rectangle with the same perimeter, but a smaller area.
Write down the area of your rectangle.

2. The perimeter of this rectangle is 22 inches.
The area of this rectangle is 24 square inches

a. Is it possible to draw a rectangle with the same area as the one on the right, but a larger perimeter?
Explain your reasoning.

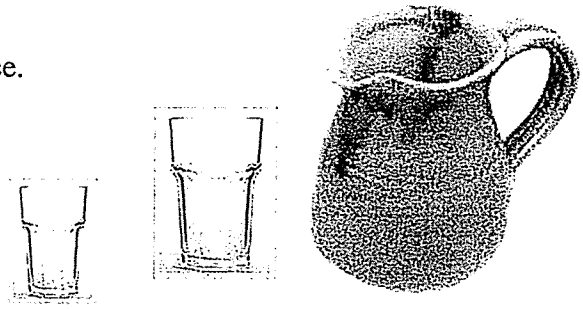


b. Is it possible to draw a rectangle with the same area, but a smaller perimeter?
Explain your reasoning.

Juice

This problem gives you the chance to:
- solve a contextualized problem

Small glasses, large glasses and jugs are filled with juice.



Four small glasses contain a total of 20 ounces of juice.

One small glass, one large glass and one jug contain a total of 33 ounces of juice.

Two small glasses and two large glasses contain a total of 26 ounces of juice.

What is the total amount of juice contained in four small glasses, two large glasses and one jug?

_____ ounces

Explain how you figured it out.