

## Reasoning

Tommy says,



Dividing by 2 is the same as finding half of a number so  $\frac{4}{11} \div 2$  is the same as  $\frac{1}{2} \times \frac{4}{11}$

Do you agree?  
Explain why.

Match the equivalent calculations.

$$\frac{1}{4} \times \frac{12}{13}$$

$$\frac{12}{13} \div 2$$

$$\frac{1}{6} \times \frac{12}{13}$$

$$\frac{12}{13} \div 6$$

$$\frac{1}{2} \times \frac{12}{13}$$

$$\frac{12}{13} \div 4$$

$$\frac{1}{3} \times \frac{12}{13}$$

$$\frac{12}{13} \div 3$$

## Problem Solving

Complete the missing integers.

$$\frac{15}{16} \div \square = \frac{5}{16}$$

$$\frac{15}{16} \div \square = \frac{3}{16}$$

$$\frac{20}{23} \div \square = \frac{4}{23}$$

$$\frac{20}{23} \div \square = \frac{5}{23}$$

Rosie walks for  $\frac{3}{4}$  of an hour over 3 days.

She walks for the same amount of time each day.

How many minutes does Rosie walk each day?

## Reasoning Answers

Tommy is correct.  
It may help  
children to  
understand this by  
reinforcing that  
 $\frac{1}{2} \times \frac{4}{11}$  is the same  
as  $\frac{1}{2}$  of  $\frac{4}{11}$

## Problem Solving Answers

$$\frac{1}{4} \times \frac{12}{13} = \frac{12}{13} \div 4$$

$$\frac{1}{6} \times \frac{12}{13} = \frac{12}{13} \div 6$$

$$\frac{1}{2} \times \frac{12}{13} = \frac{12}{13} \div 2$$

$$\frac{1}{3} \times \frac{12}{13} = \frac{12}{13} \div 3$$

## Reasoning Answers

$$\frac{1}{6} \times \frac{1}{4}$$

Possible answers:

$$\frac{2}{3} \times \frac{3}{4} = \frac{6}{12} = \frac{1}{2}$$

$$\frac{2}{2} \times \frac{3}{6} = \frac{6}{12} = \frac{1}{2}$$

Children could also use improper fractions.

## Problem Solving Answers

## Reasoning/PS Answers

$$8 \times 4\frac{3}{8} = 8 \times \frac{35}{8}$$
$$= \frac{280}{8} = 35$$

The distance between the first and last lamp post is 35 metres.

$$\triangle \times 5 = \frac{5}{6}$$

$$\parallel \times 5 = \frac{5}{3} = 1\frac{2}{3}$$

$$\triangle \times 5 = \frac{5}{2} = 2\frac{1}{2}$$

$$4 \times 4\frac{1}{4} = \frac{68}{4}$$

$$= 17 \text{ hours}$$

$$5 \times 2\frac{3}{4} = \frac{55}{4}$$

$$= 13\frac{3}{4} \text{ hours}$$

Eva spent  $3\frac{1}{4}$  hours longer on her project than Amir did.