

## Worksheet 16

### Multiplying Fractions by Whole Numbers

1 Calculate.

$$\begin{aligned} \text{(a)} \quad 10 \times \frac{3}{5} \\ &= 10 \times 3 \text{ fifths} \\ &= 30 \text{ fifths} \\ &= \frac{30}{5} \\ &= \boxed{6} \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad 10 \times \frac{2}{3} &= \boxed{10} \times \boxed{2} \text{ thirds} \\ &= \boxed{20} \text{ thirds} \\ &= \boxed{\frac{20}{3}} \\ &= \boxed{6\frac{2}{3}} \end{aligned}$$

$$\begin{aligned} \text{(c)} \quad 9 \times \frac{2}{7} &= \boxed{9} \times \boxed{2} \text{ sevenths} \\ &= \boxed{18} \text{ sevenths} \\ &= \boxed{\frac{18}{7}} \\ &= \boxed{2\frac{4}{7}} \end{aligned}$$

2 Calculate.

$$\begin{aligned} \text{(a)} \quad \frac{1}{6} \times 7 &= \frac{1}{6} \times \frac{7}{1} = \frac{7}{6} \\ &= 1 \frac{1}{6} \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad \frac{1}{6} \times 8 &= \frac{1}{6} \times \frac{8}{1} = \frac{8}{6} \\ &= 1 \frac{1}{3} \end{aligned}$$

$$\begin{aligned} \text{(c)} \quad \frac{1}{6} \times 9 &= \frac{1}{6} \times \frac{9}{1} = \frac{9}{6} \\ &= 1 \frac{1}{2} \end{aligned}$$

3 Holly used  $\frac{2}{3}$  m of ribbon to tie one parcel. How many metres of ribbon will she need for 5 similar parcels?

$$\begin{aligned} \frac{2}{3} \times \frac{5}{1} &= \frac{10}{3} \\ &= 3 \frac{1}{3} \end{aligned}$$

Jack and Whitney have some juice.

Jack drinks  $2\frac{1}{4}$  litres and Whitney drinks  $2\frac{5}{12}$  litres.

How much do they drink altogether?

Complete this using two different methods.

Which method do you think is more efficient? Why?

Which subtraction is the odd one out?

A

$$\frac{13}{4} - \frac{3}{8}$$

B

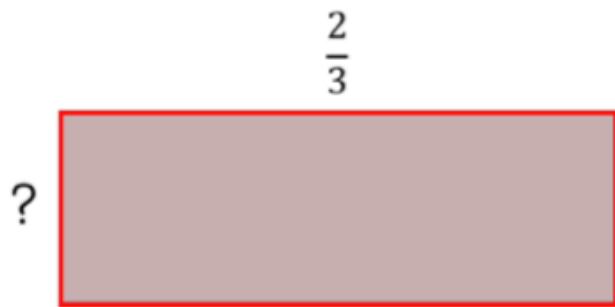
$$\frac{10}{3} - \frac{2}{9}$$

C

$$\frac{23}{7} - \frac{1}{3}$$

Explain why.

The perimeter of the rectangle is  $\frac{16}{9}$



Work out the missing length.

Fill in the missing numbers.

$$4 \frac{5}{6} + \boxed{\phantom{00}} \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} = 10 \frac{1}{3}$$

**Challenge answers below:**

Jack and Whitney have some juice.

Jack drinks  $2\frac{1}{4}$  litres and Whitney drinks  $2\frac{5}{12}$  litres.

How much do they drink altogether?

Complete this using two different methods.

Which method do you think is more efficient? Why?

They drink  $4\frac{2}{3}$  litres altogether.

Encourage children to justify which method they prefer and why. Ensure children discuss which method is more or less efficient.

Fill in the missing numbers.

$$4\frac{5}{6} + \boxed{\phantom{00}}\frac{\boxed{\phantom{0}}}{\boxed{\phantom{0}}} = 10\frac{1}{3}$$

$$5\frac{3}{6} \text{ or } 5\frac{1}{2}$$

The perimeter of the rectangle is  $\frac{16}{9}$



Work out the missing length.

The missing length is  $\frac{2}{9}$

Which subtraction is the odd one out?

A

$$\frac{13}{4} - \frac{3}{8}$$

B

$$\frac{10}{3} - \frac{2}{9}$$

C

$$\frac{23}{7} - \frac{1}{3}$$

Explain why.

Possible answers:

C is the odd one out because the denominators aren't multiples of each other.

A is the odd one out because the denominators are even.

B is the odd one out because it is the only answer above 3