

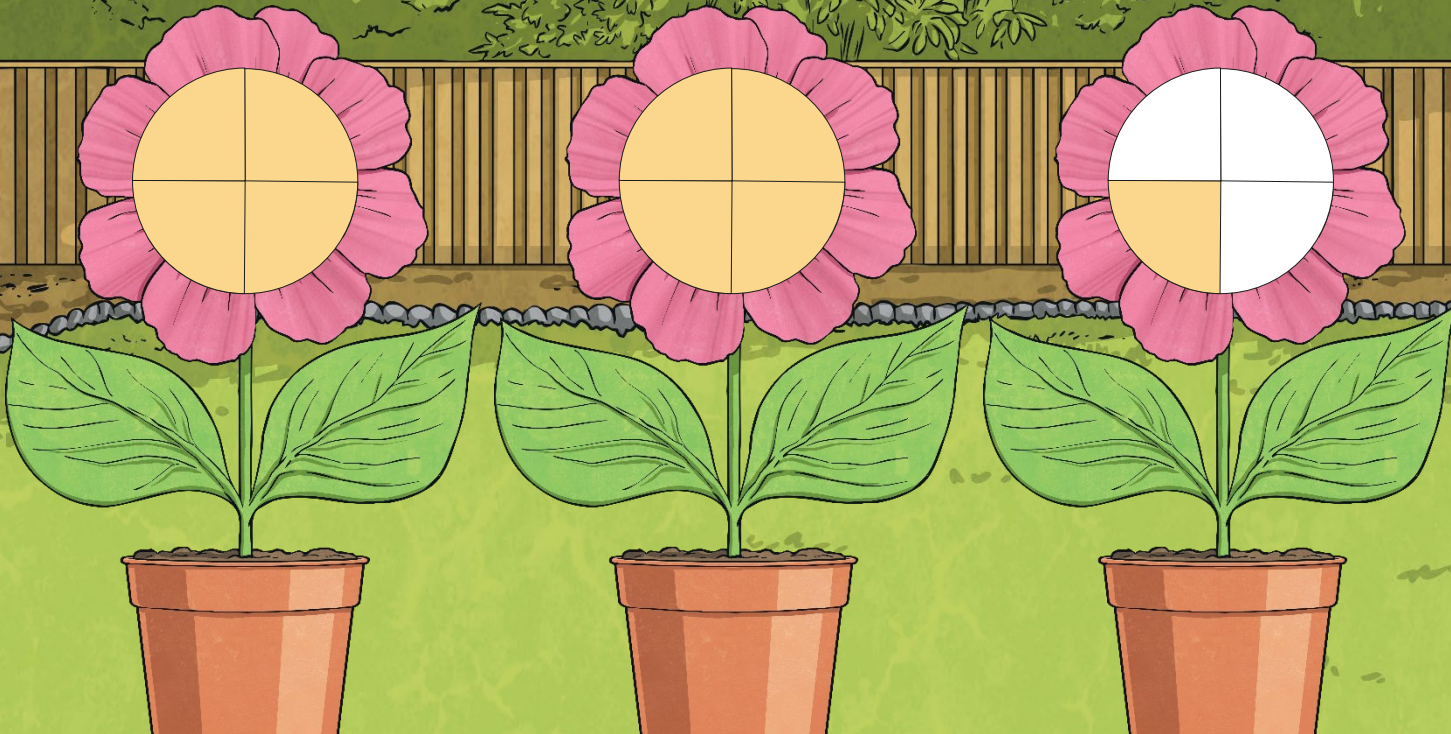
Fraction Flower Garden



Fraction Flowers



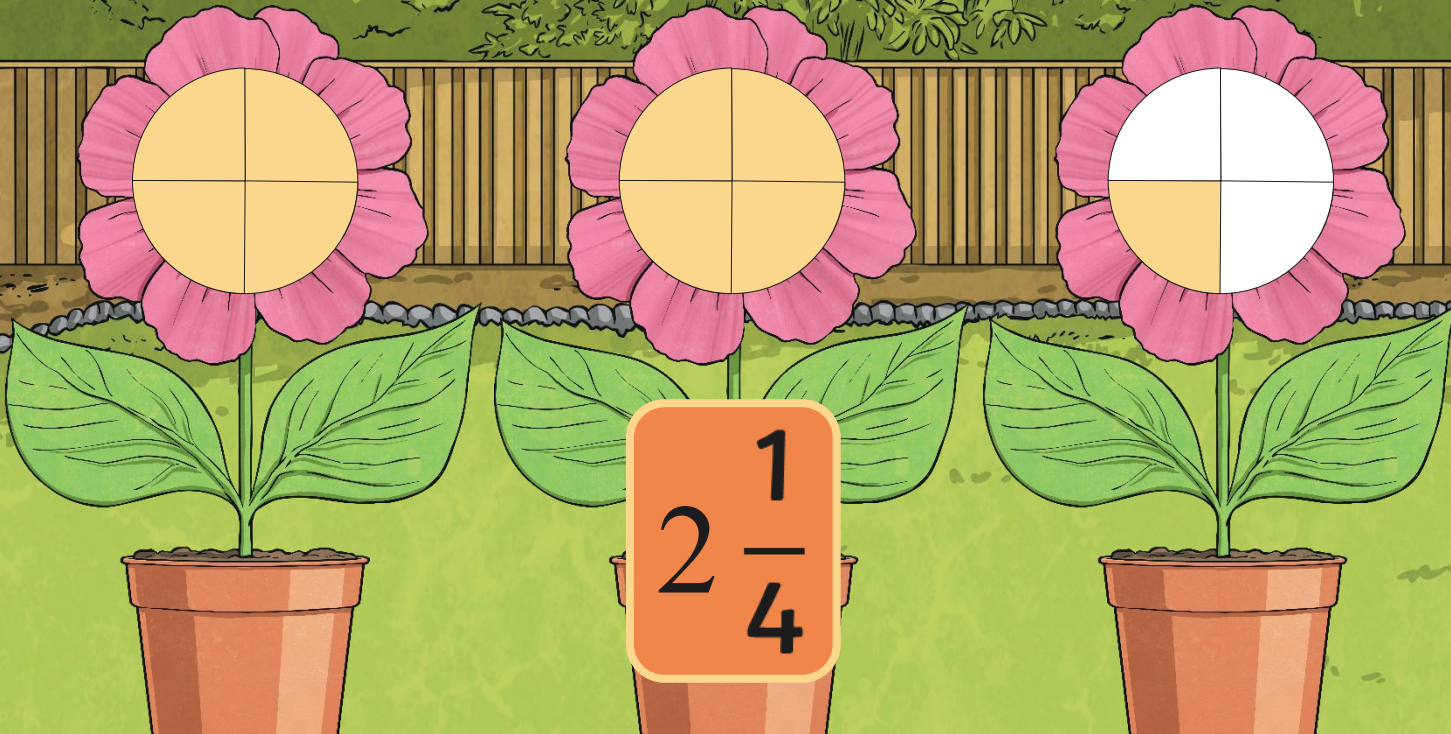
Write how many yellow segments there are as a mixed number.



Fraction Flowers



Write how many yellow segments there are as a mixed number.



Fraction Flowers



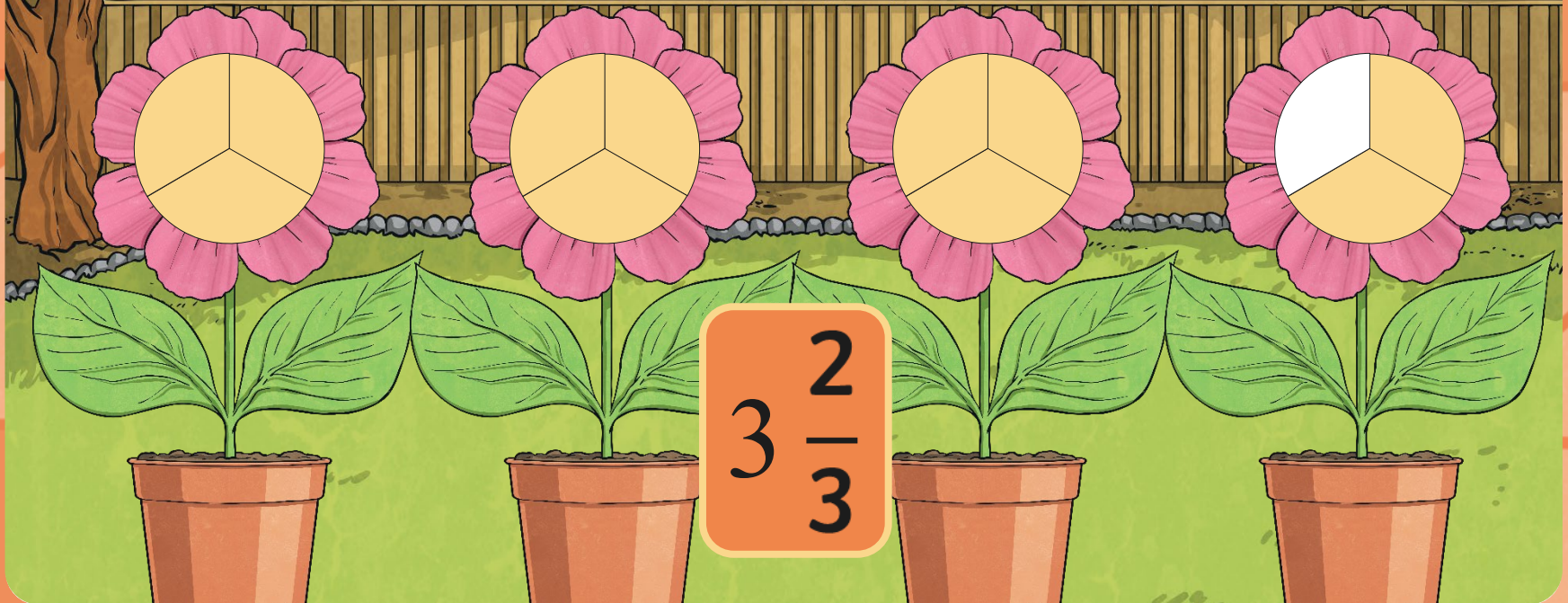
Write how many yellow segments there are as a mixed number.



Fraction Flowers



Write how many yellow segments there are as a mixed number.



3 $\frac{2}{3}$

Fraction Flowers



Write how many yellow segments there are as a mixed number.



Fraction Flowers



Write how many yellow segments there are as a mixed number.



Fraction Flowers



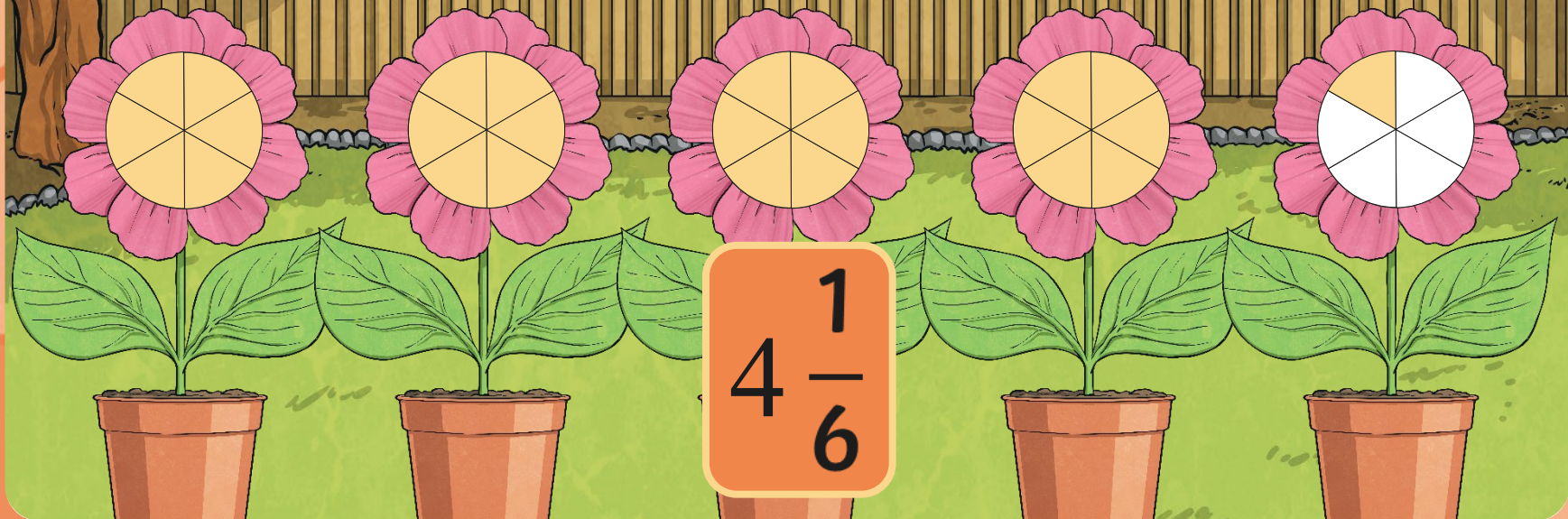
Write how many yellow segments there are as a mixed number.



Fraction Flowers



Write how many yellow segments there are as a mixed number.



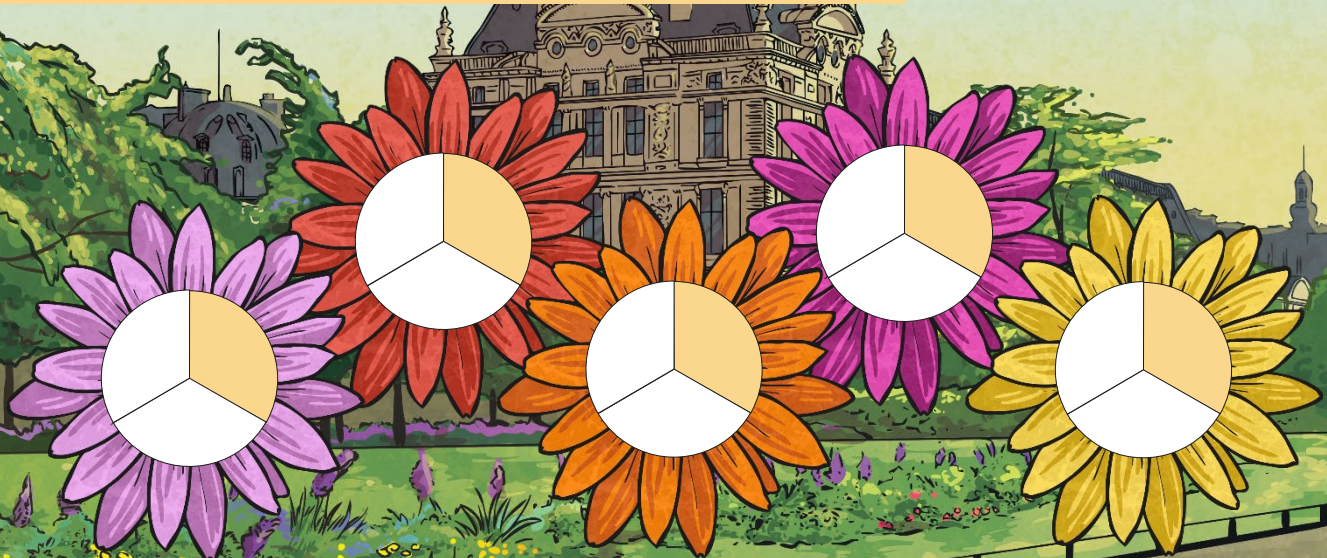
$4\frac{1}{6}$

Multiplying Fraction Flowers



Multiplying a fraction by a whole number
is the same as repeated addition.

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



$$\frac{1}{3}$$

+

$$\frac{1}{3}$$

+

$$\frac{1}{3}$$

+

$$\frac{1}{3}$$

+

$$\frac{1}{3}$$

=

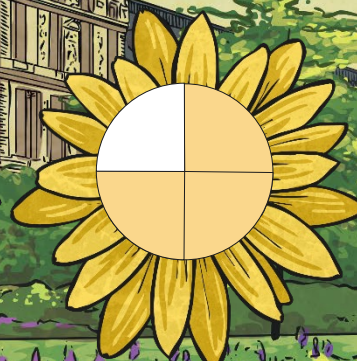
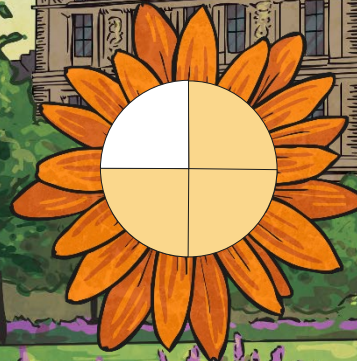
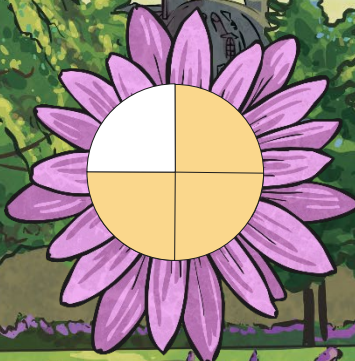
$$\frac{5}{3}$$

Multiplying Fraction Flowers



Multiplying a fraction by a whole number
is the same as repeated addition.

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



$$\frac{3}{4}$$

+

$$\frac{3}{4}$$

+

$$\frac{3}{4}$$

=

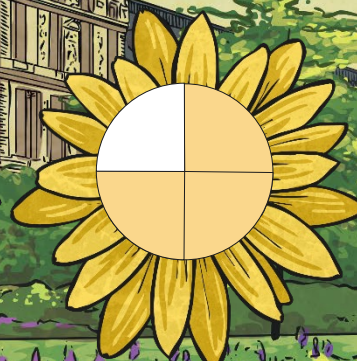
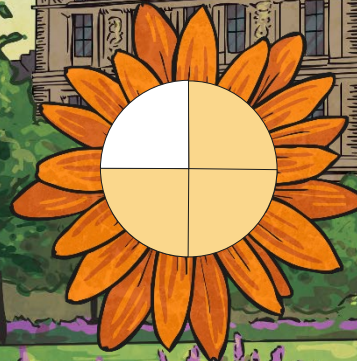
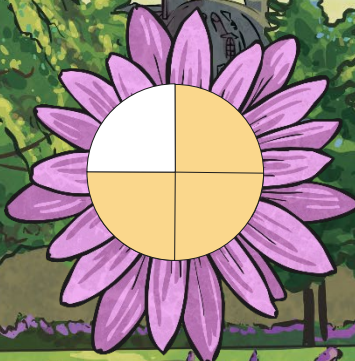
?

Multiplying Fraction Flowers



Multiplying a fraction by a whole number
is the same as repeated addition.

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



$$\frac{3}{4}$$

+

$$\frac{3}{4}$$

+

$$\frac{3}{4}$$

=

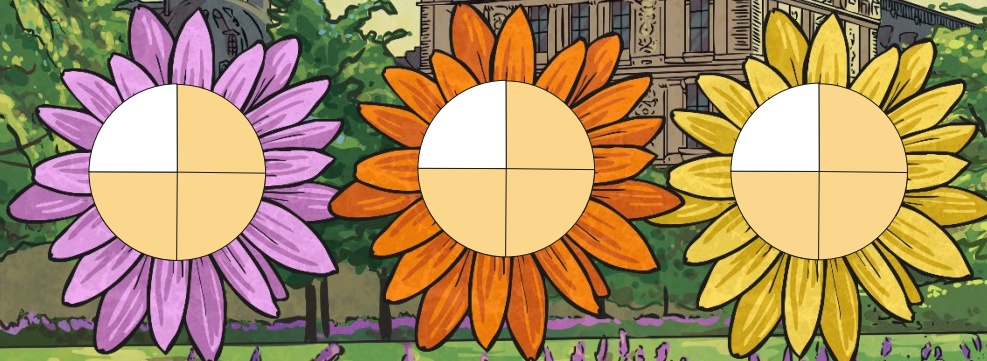
$$\frac{9}{4}$$

Multiplying Fraction Flowers



The answer to this fraction multiplication
is an improper fraction:

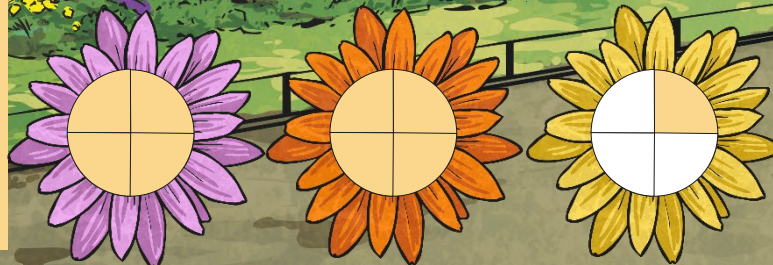
$$\frac{3}{4} \times 3$$



=

$$\frac{9}{4}$$

The answer can
be written as
an equivalent
mixed number:



$$\frac{9}{4}$$

=

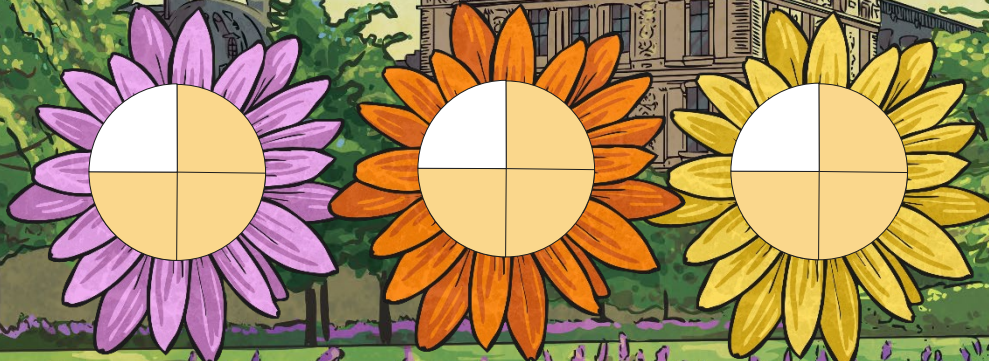
?

Multiplying Fraction Flowers



The answer to this fraction multiplication is an improper fraction:

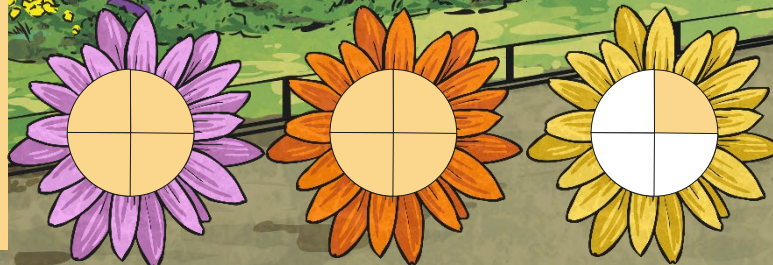
$$\frac{3}{4} \times 3$$



=

$$\frac{9}{4}$$

The answer can be written as an equivalent mixed number:



$$\frac{9}{4}$$

=

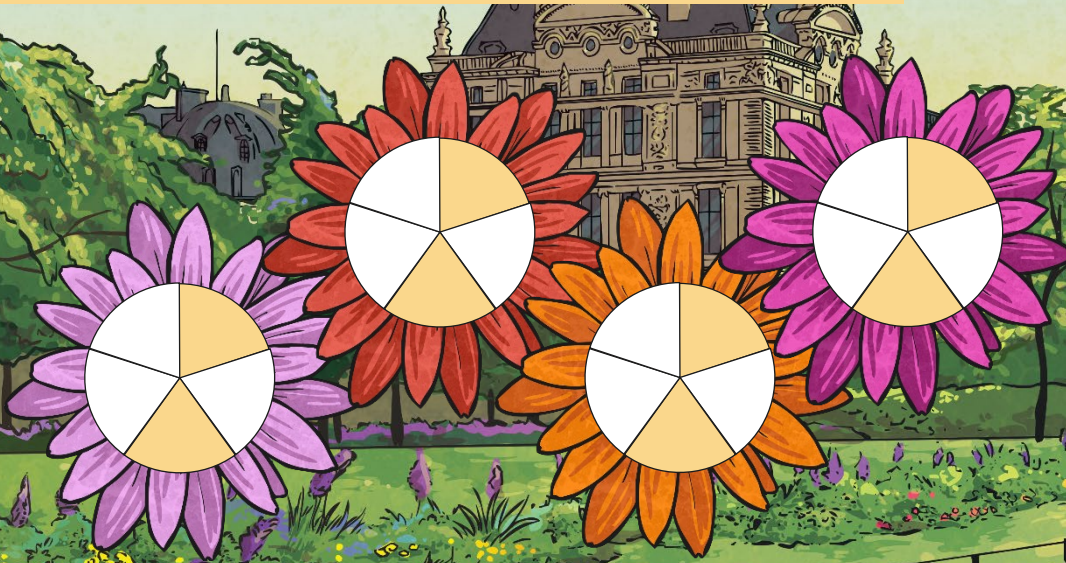
$$2\frac{1}{4}$$

Multiplying Fraction Flowers



Multiplying a fraction by a whole number
is the same as repeated addition.

$$\frac{2}{5} \times 4$$



$$\frac{2}{5}$$

+

$$\frac{2}{5}$$

+

$$\frac{2}{5}$$

+

$$\frac{2}{5}$$

=

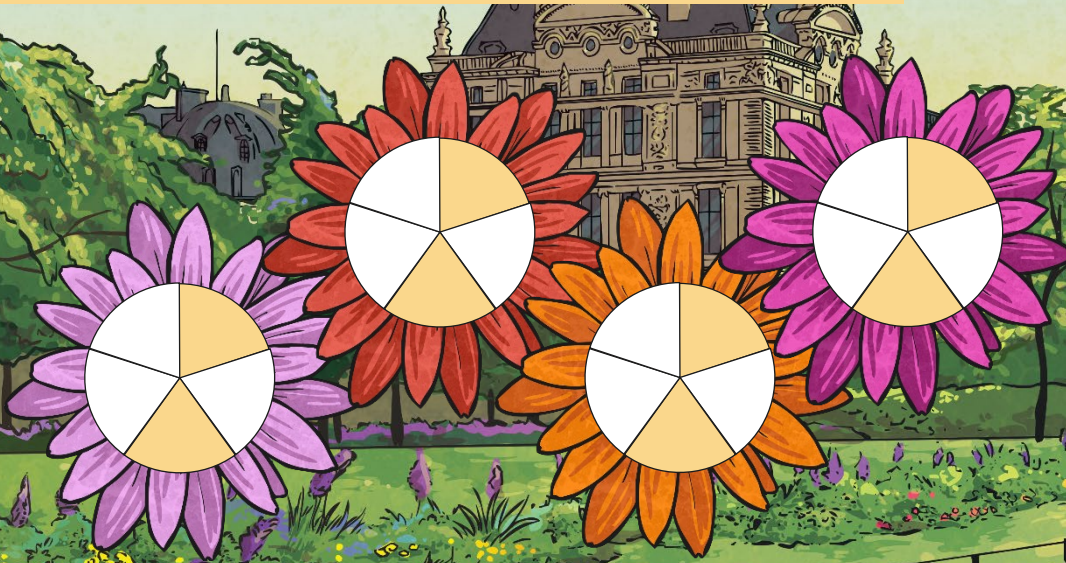
?

Multiplying Fraction Flowers



Multiplying a fraction by a whole number
is the same as repeated addition.

$$\frac{2}{5} \times 4$$



$$\frac{2}{5}$$

+

$$\frac{2}{5}$$

+

$$\frac{2}{5}$$

+

$$\frac{2}{5}$$

=

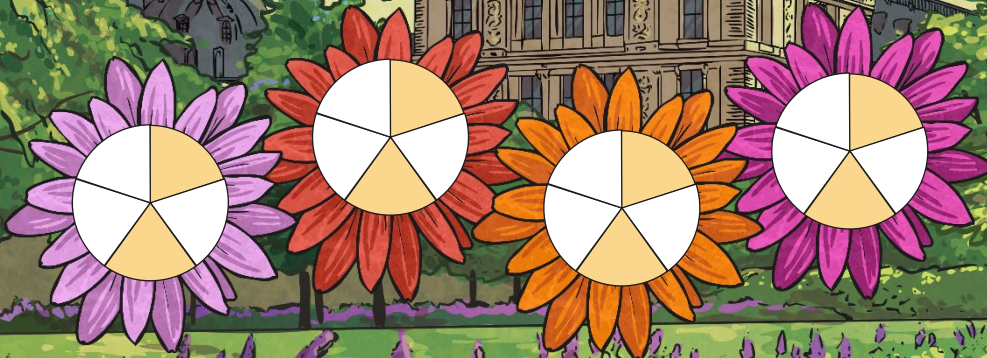
$$\frac{8}{5}$$

Multiplying Fraction Flowers



The answer to this fraction multiplication
is an improper fraction:

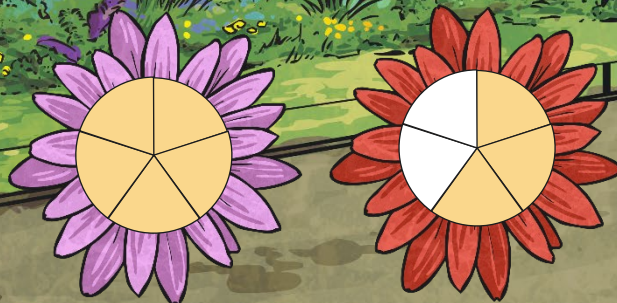
$$\frac{2}{5} \times 4$$



=

$$\frac{8}{5}$$

The answer can
be written as
an equivalent
mixed number:



$$\frac{8}{5}$$

=

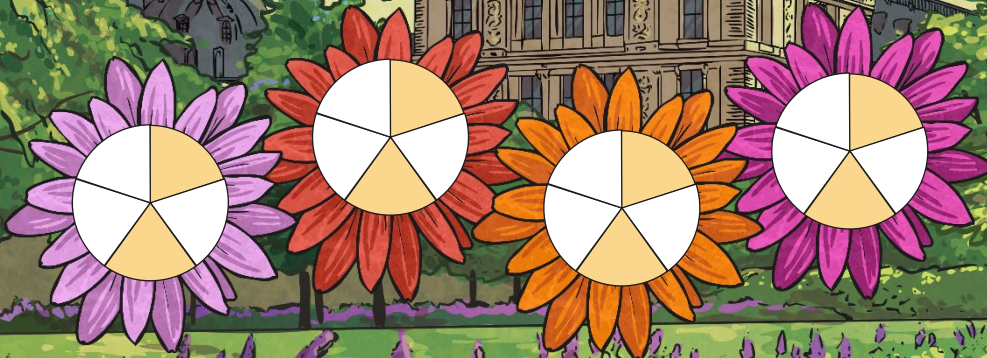
?

Multiplying Fraction Flowers



The answer to this fraction multiplication
is an improper fraction:

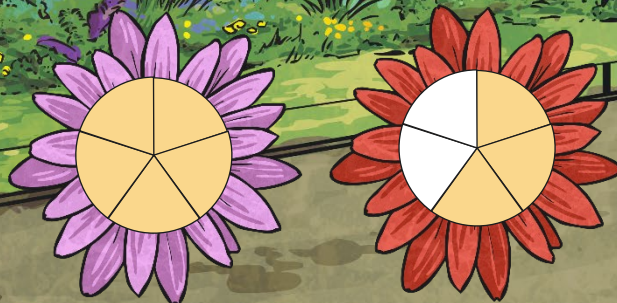
$$\frac{2}{5} \times 4$$



=

$$\frac{8}{5}$$

The answer can
be written as
an equivalent
mixed number:



$$\frac{8}{5}$$

=

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

Investigate It



Look at the calculations we have completed so far.

What happens to the **numerator** when you multiply a fraction by a whole number?

What happens to the **denominator** when you multiply a fraction by a whole number?

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

$$\frac{3}{4} \times 3 = \frac{9}{4}$$

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

Investigate It



We multiply the numerator by the whole number.
 $1 \times 5 = 5$

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

We multiply the numerator by the whole number.
 $3 \times 3 = 9$

We multiply the denominator by one.
 $3 \times 1 = 3$

$$\frac{3}{4} \times \frac{3}{1} = \frac{9}{4}$$

We multiply the denominator by one.
 $4 \times 1 = 4$

We multiply the numerator by the whole number.
 $2 \times 4 = 8$

$$\frac{2}{5} \times \frac{4}{1} = \frac{8}{5}$$

We multiply the denominator by one.
 $5 \times 1 = 5$

Multiplying a fraction by a whole number - the steps...



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

First, put the whole number over 1 so that it is a fraction.

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

Multiply the numerators together, and multiply the denominators together.

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

Can your answer be simplified?

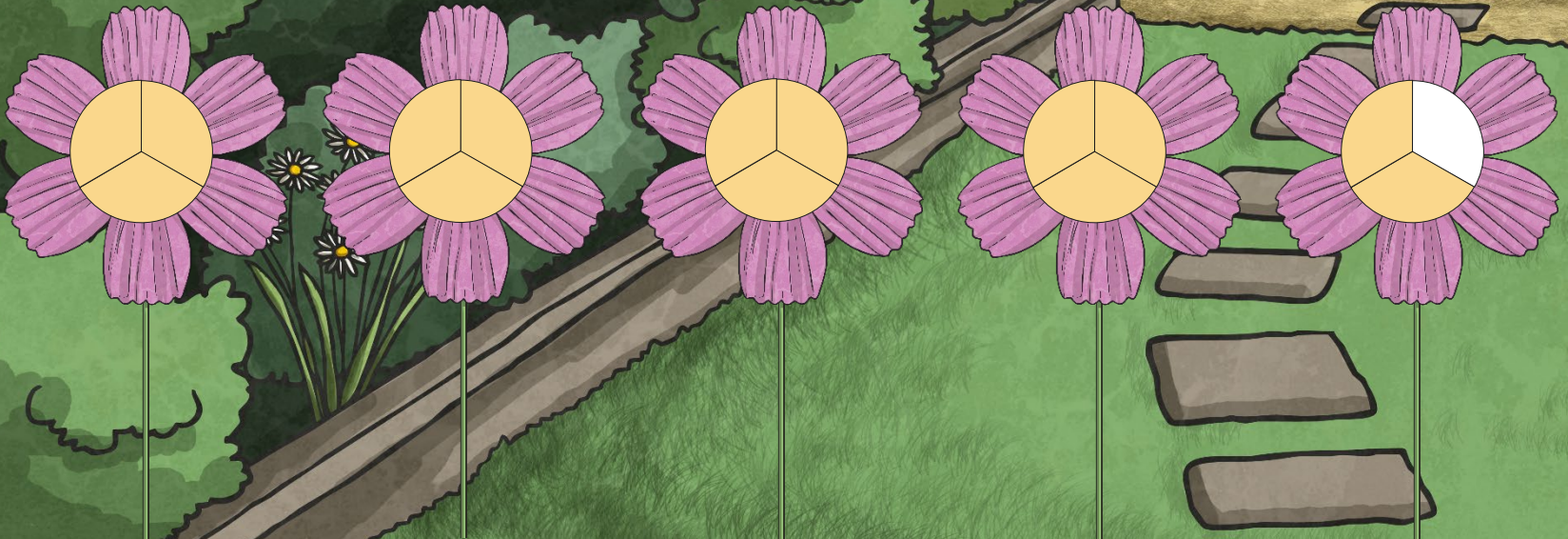
$$\frac{4}{3} = 1 \frac{1}{3}$$

Multiplication Match



What is the answer
to this calculation
as a mixed number?

$$\frac{2}{3} \times 7 =$$



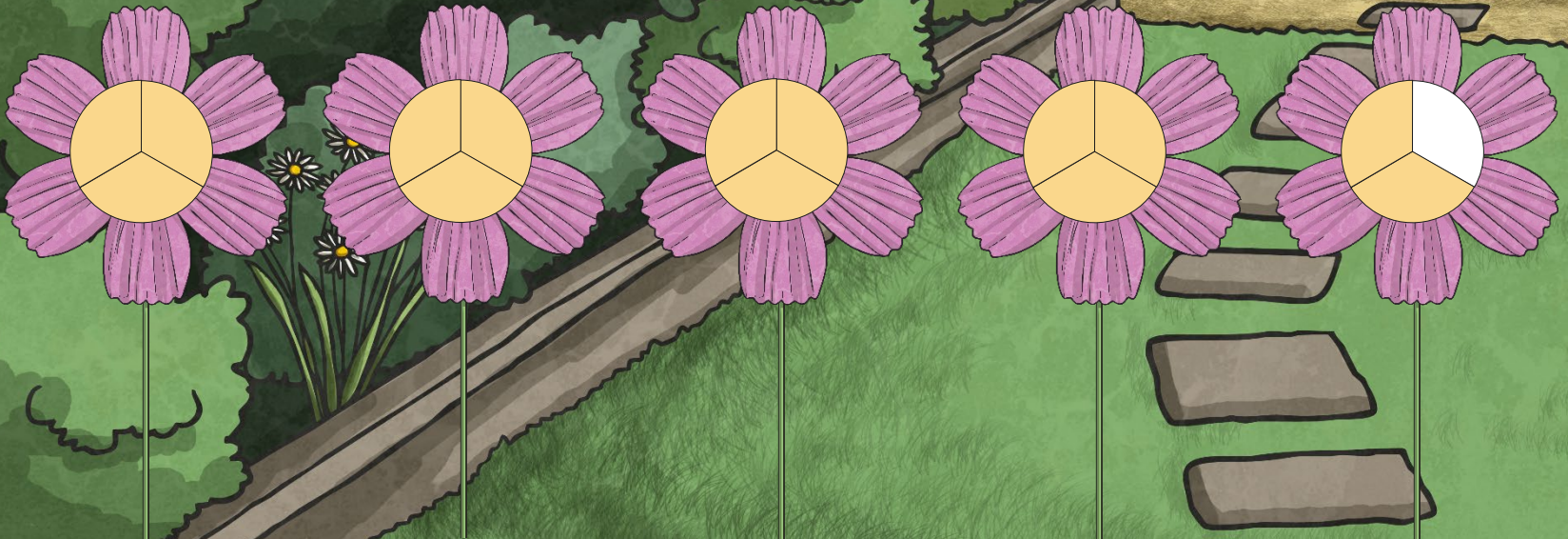
Multiplication Match



What is the answer
to this calculation
as a mixed number?

$$\frac{2}{3} \times 7 =$$

$$\frac{14}{3} = 4 \frac{2}{3}$$

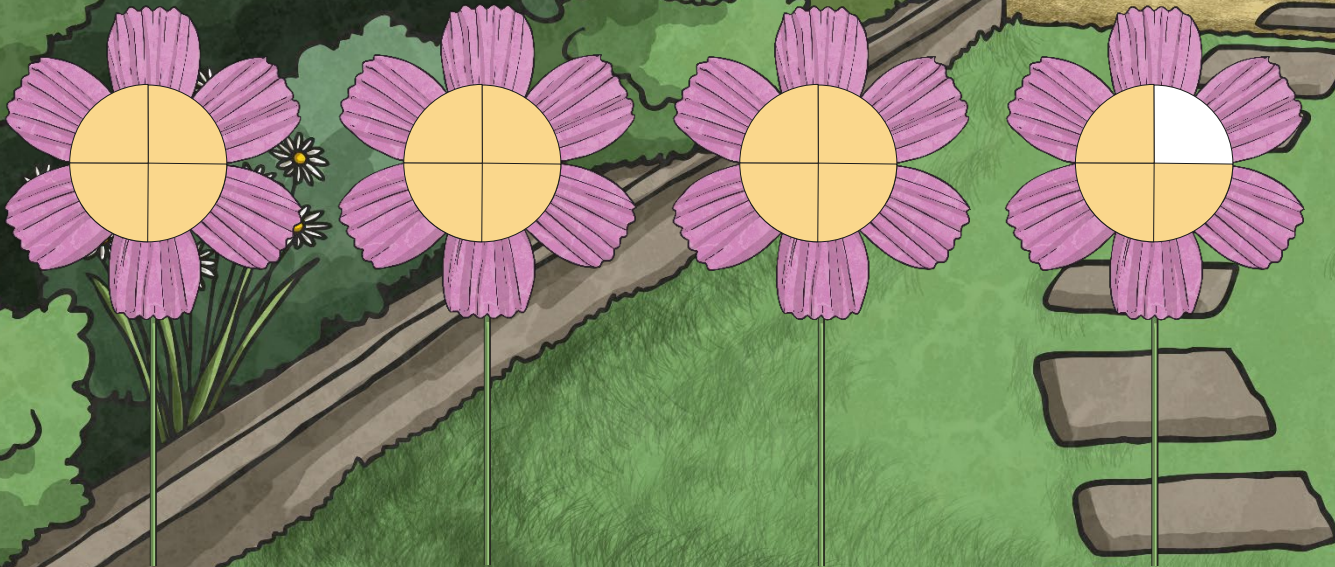


Multiplication Match



What is the answer
to this calculation
as a mixed number?

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



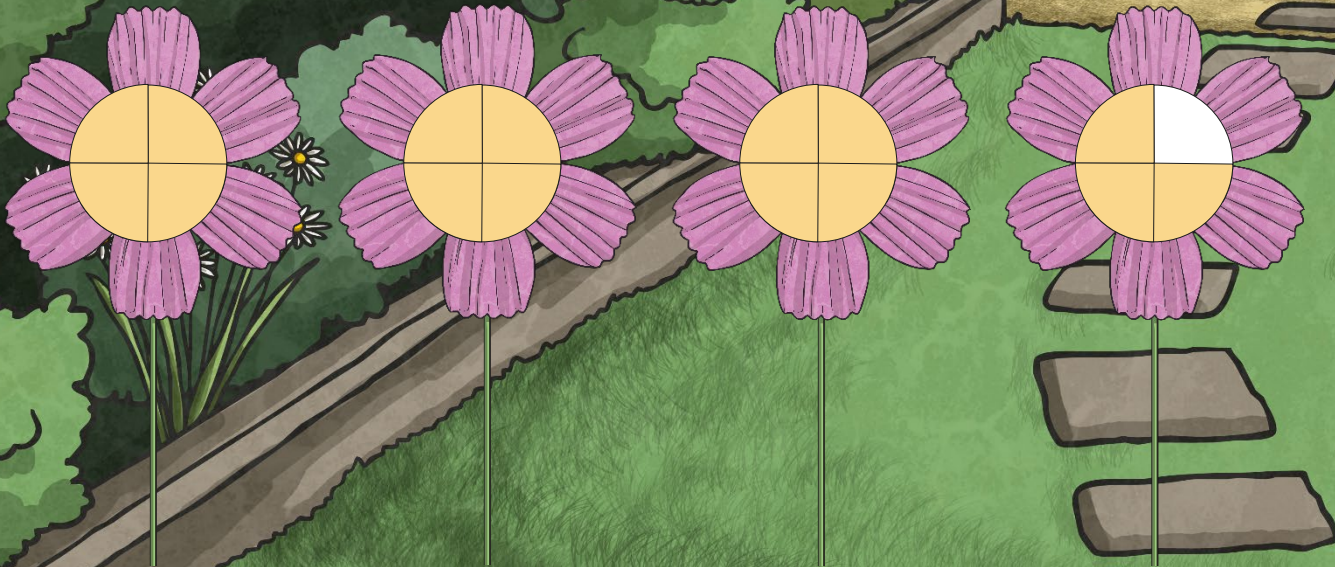
Multiplication Match



What is the answer to this calculation as a mixed number?

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

$$\frac{15}{4} = 3 \frac{3}{4}$$

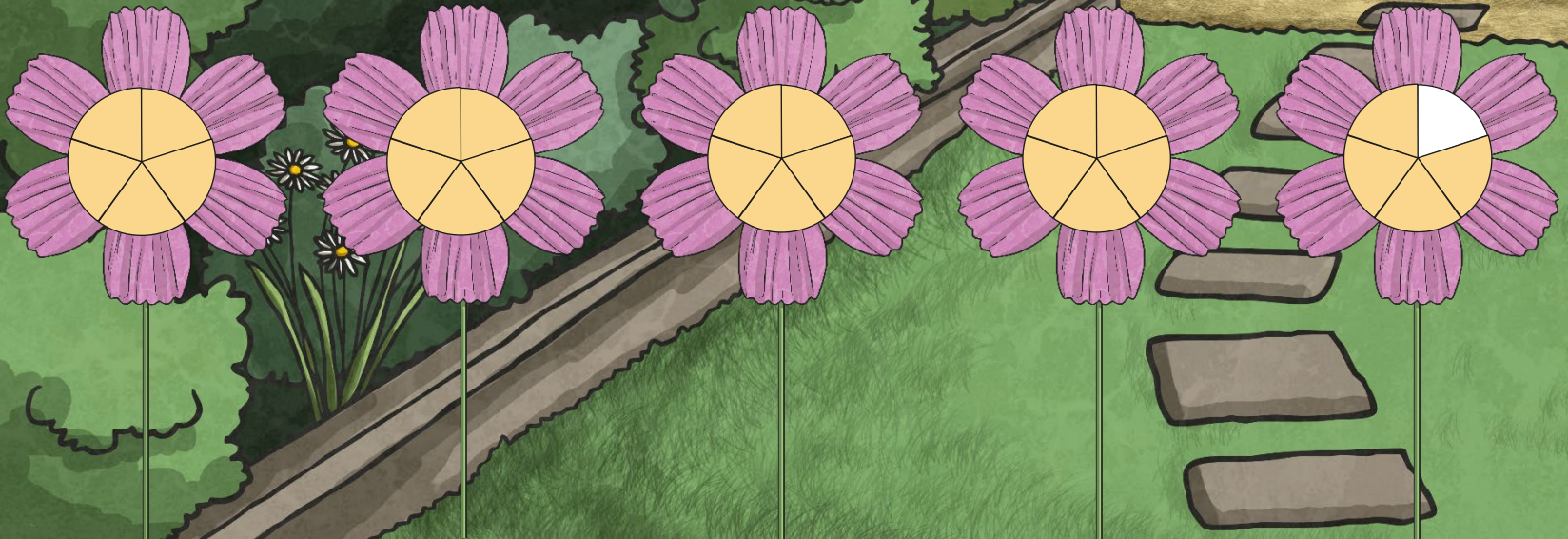


Multiplication Match



What is the answer
to this calculation
as a mixed number?

$$2\frac{2}{3} \times 7 =$$



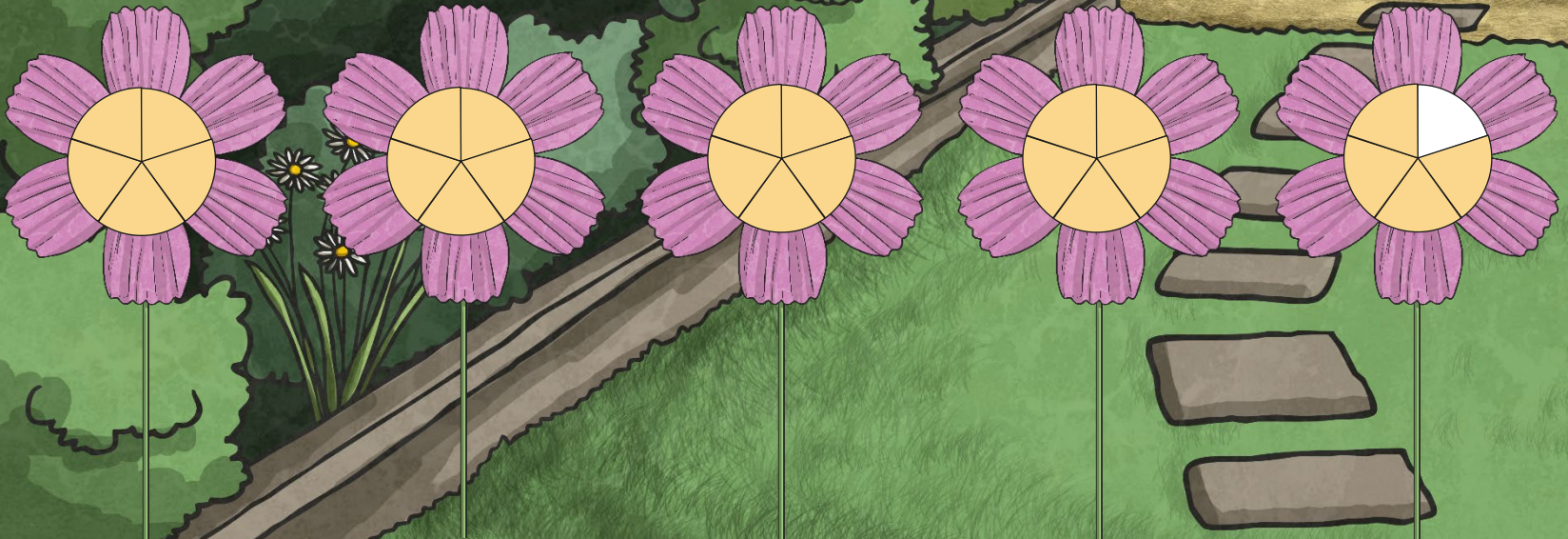
Multiplication Match



What is the answer to this calculation as a mixed number?

$$\frac{2}{3} \times 7 =$$

$$\frac{14}{3} = 4 \frac{2}{3}$$



Multiplying Mixed Numbers



To multiply a mixed number by a whole number, you can also change the mixed number into an improper fraction.

In this mixed number, every whole is made of four parts.
 $(2 \times 4) + 1 = 9$

The numerator is multiplied by the whole number.
 $9 \times 2 = 18$

This answer is an improper fraction. We need to change it to a mixed number.

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

=

$$\frac{9 \times 2}{4 \times 1}$$

=

$$\frac{18}{4}$$

=

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

The denominator is multiplied by one.
 $4 \times 1 = 4$

$$18 \div 4 = 4 \text{ r } 2$$

Multiplying Mixed Numbers



To multiply a mixed number by a whole number, you can also change the mixed number into an improper fraction.

In this mixed number, every whole is made of four parts.
 $(1 \times 7) + 4 = 11$

The numerator is multiplied by the whole number.
 $11 \times 3 = 33$

This answer is an improper fraction. We need to change it to a mixed number.

$$1\frac{4}{7} \times 3 = \frac{11}{7} \times \frac{3}{1} = \frac{33}{7} = 4\frac{5}{7}$$

The denominator is multiplied by one.
 $7 \times 1 = 7$

$$33 \div 7 = 4 \text{ r } 5$$

You try...

Try these...

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

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

You try...

Try these...

$$1\frac{2}{5} \times 2 = \frac{7}{5} \times \frac{2}{1} = \frac{14}{5} = 2\frac{4}{5}$$

$$2\frac{1}{3} \times 4 = \frac{7}{3} \times \frac{4}{1} = \frac{28}{3} = 9\frac{1}{3}$$

Word Up



Six friends took part in a sponsored swim.

They each swam $1\frac{1}{\text{£}}$ km.

How many kilometres did they swim in total?

$$1\frac{1}{\text{£}} \times 6 = \frac{\text{úû}}{\text{£}} \times 6 = \frac{\text{¢£}}{\text{£}} =$$

Word Up



Six friends took part in a sponsored swim.

They each swam $1\frac{1}{\text{£}}$ km.

How many kilometres did they swim in total?

$$1\frac{1}{\text{£}} \times 6 = \frac{\text{úû}}{\text{£}} \times 6 = \frac{\text{¢£}}{\text{£}} = 9\frac{\circ}{\text{£}} \text{ km}$$

