Year 4 Maths, 1/2/21

RECALL

- What are equivalent fractions?

- How many of these fractions are equivalent to a half? How do you know?

$$\frac{2}{4} \qquad \frac{1}{8} \qquad \frac{4}{8} \qquad \frac{1}{2} \qquad \frac{4}{6} \qquad \frac{3}{6} \qquad \frac{7}{10}$$

RECALL

- The circled fractions are equivalent to a half.

$$\frac{2}{4} \qquad \frac{1}{8} \qquad \frac{4}{8} \qquad \frac{1}{2} \qquad \frac{4}{6} \qquad \frac{3}{6} \qquad \frac{7}{10}$$
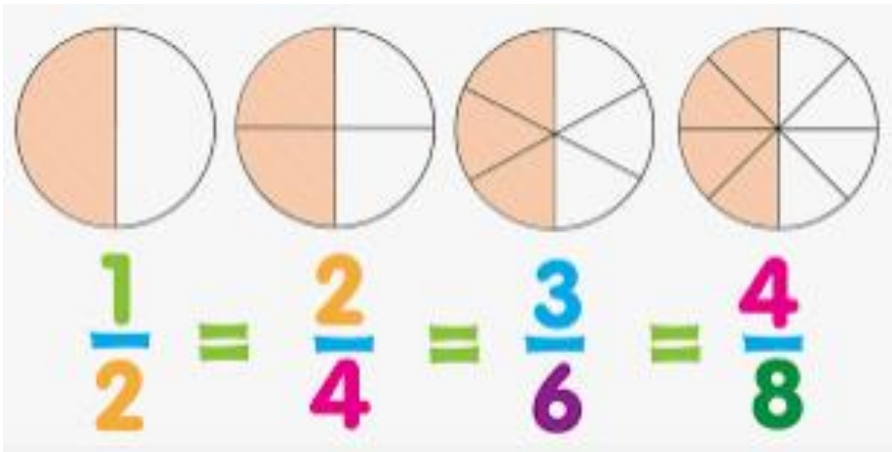
$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8}$$

Did you also notice that in each fraction that is equivalent to a half, the numerator is half of the denominator!

Learning Objective:

- I can recognise and calculate equivalent fractions.
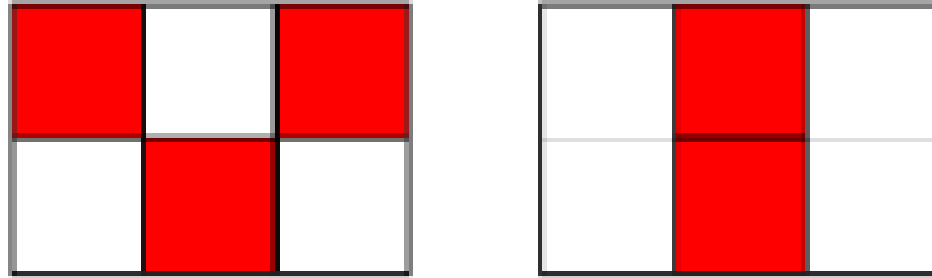
SOME WILL EVEN use multiplication and division to find equivalent fractions with larger denominators

SOME will calculate equivalent fractions

MOST will show equivalent fractions using shapes

ALL will recognise and calculate fractions equivalent to a half
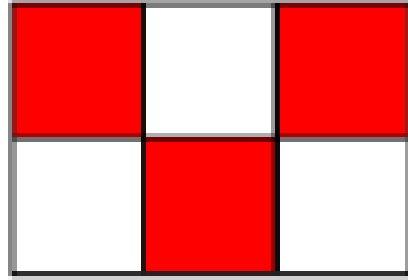
Guided practice

Look at these two shapes. What fraction of each is shaded?

Which one is equivalent to a half?
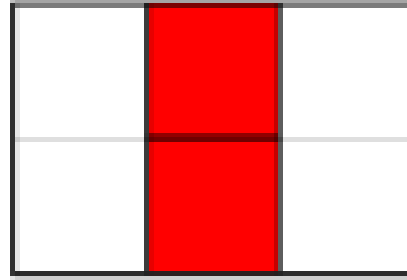
How do you know?

Guided practice answer

Three out of six parts are shaded.

$$\frac{3}{6}$$

If I compare this fraction to a half, I can see that the numerator and denominator have both been multiplied by three. That means they are equivalent fractions.

$$\frac{1}{2} \xrightarrow[\text{X 3}]{\text{X 3}} \frac{3}{6}$$

Equivalent

Two out of six parts are shaded.

$$\frac{2}{6}$$

If I compare this fraction to a half, I can see that the numerator and denominator have been multiplied by different amounts. That means they are not equivalent fractions.

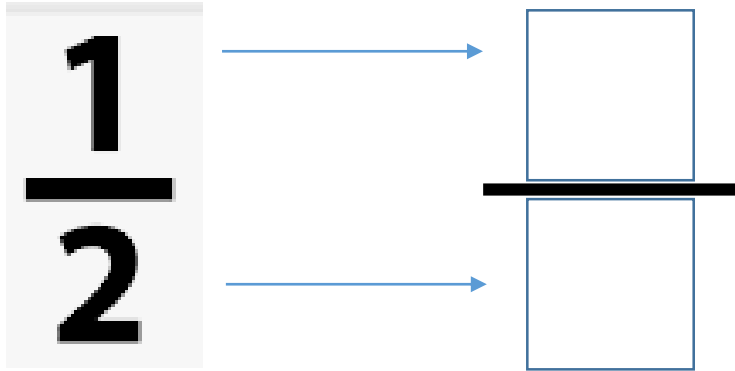$$\frac{1}{2} \xrightarrow[\text{X 3}]{\text{X 2}} \frac{2}{6}$$
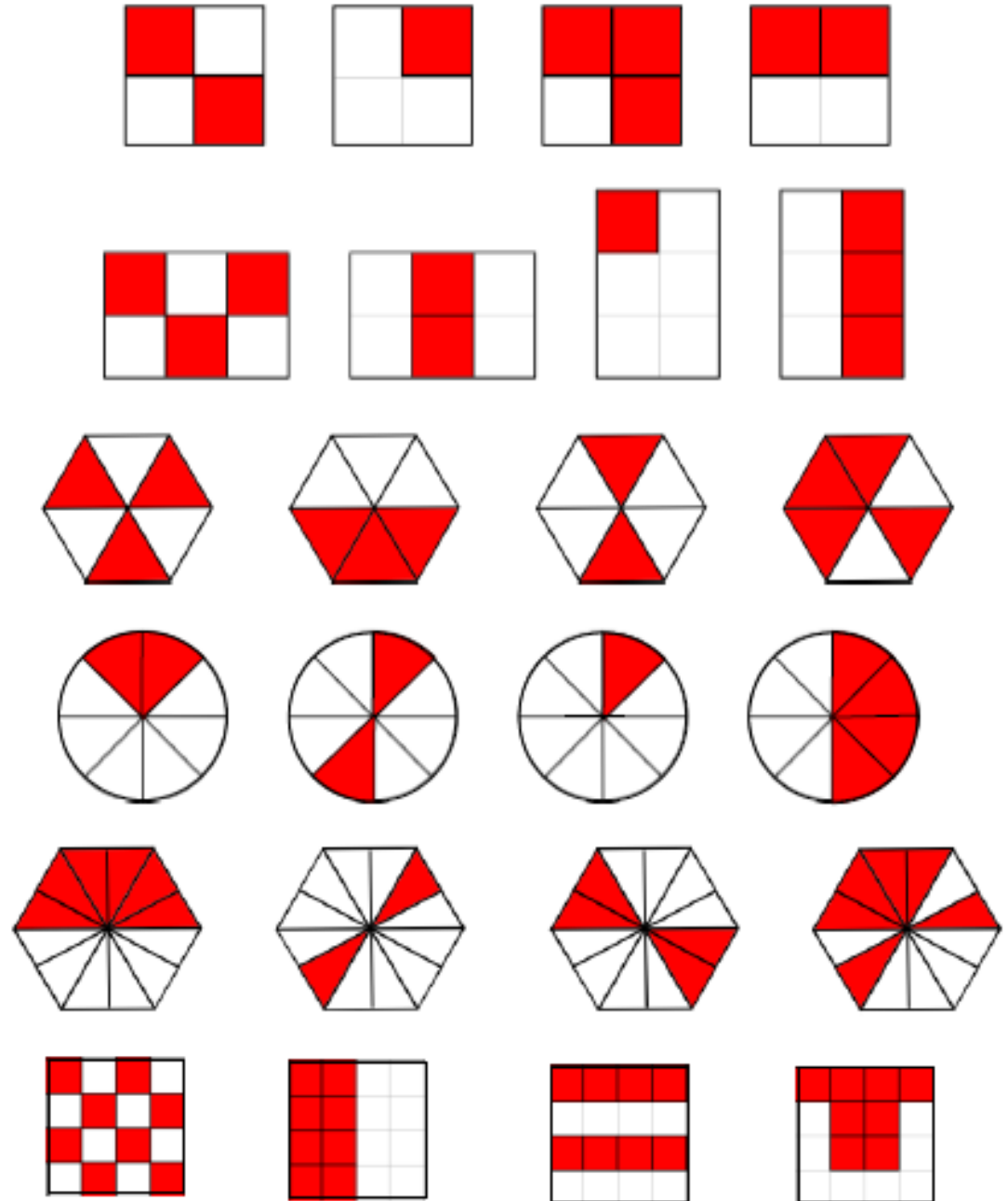
Not equivalent

One chilli

Write down the fraction shown by each shape.

Compare each fraction to a half.
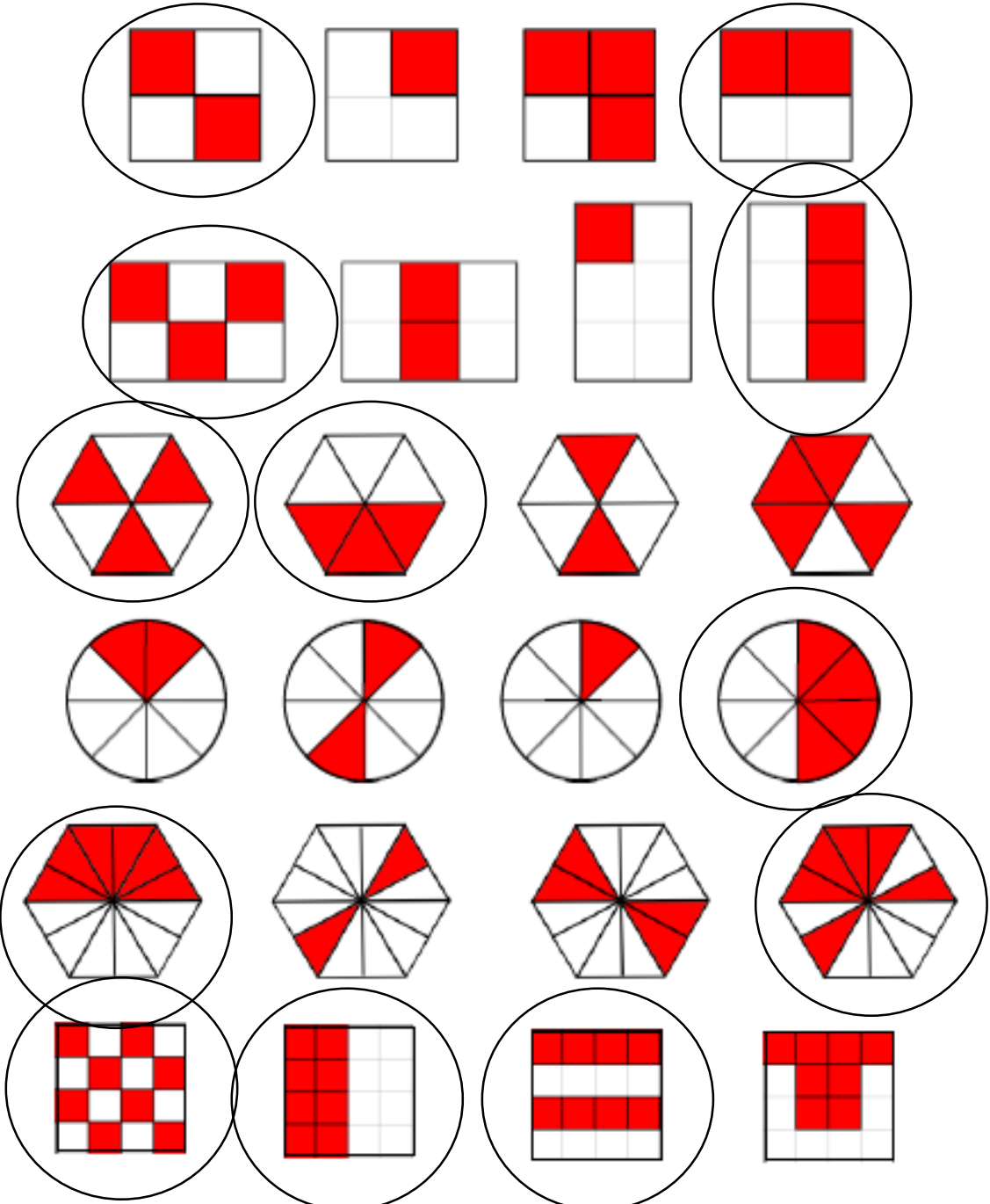If the numerator and denominator have been multiplied by the same number, the fraction is equivalent to a half.

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

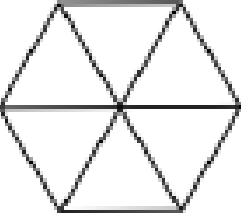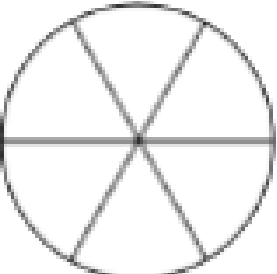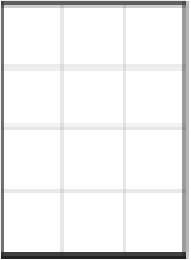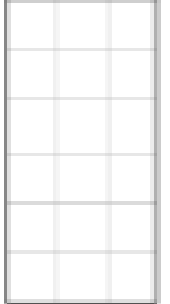Circle the shapes that are equivalent to a half.

One chilli answers
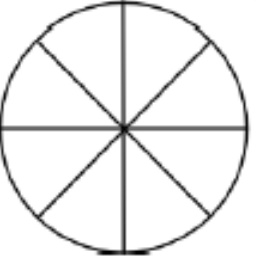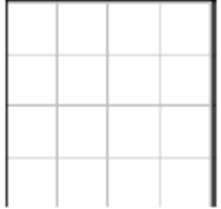
Two chillies

Shade 1/3 of each of these shapes.

What equivalent fraction does each shape show?

Equivalent fraction =

Equivalent fraction =
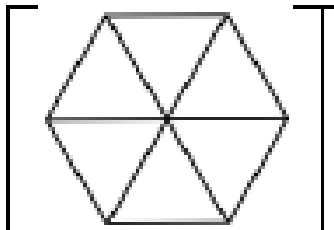
Equivalent fraction =

Equivalent fraction =

Shade 1/4 of each of these shapes.

What equivalent fraction does each shape show?

Equivalent fraction =

Equivalent fraction =

Equivalent fraction =

Two chillies answers

Equivalents to 1/3

2 parts shaded $\dfrac{2}{6}$

Equivalent fraction =

2 parts shaded $\dfrac{2}{6}$

Equivalent fraction =

4 parts shaded $\dfrac{4}{12}$

Equivalent fraction =

6 parts shaded $\dfrac{6}{18}$
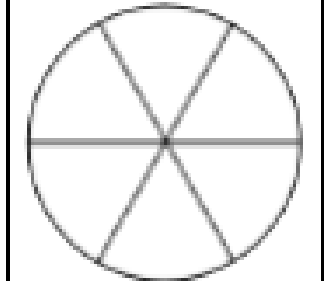
Equivalent fraction =

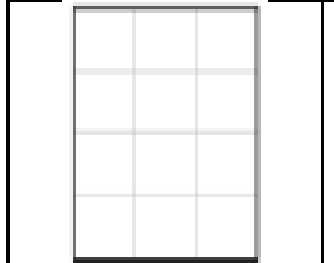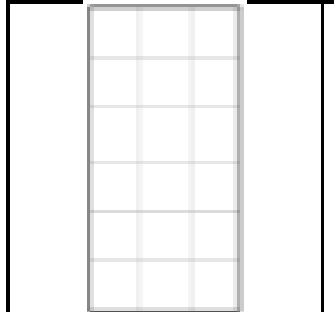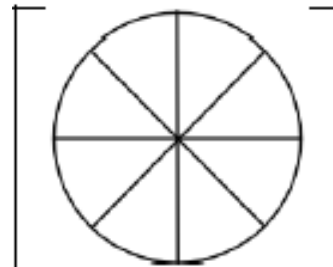**Equivalents to 1/4**

2 parts shaded $\dfrac{2}{8}$

Equivalent fraction =

2 parts shaded $\dfrac{2}{8}$

Equivalent fraction =
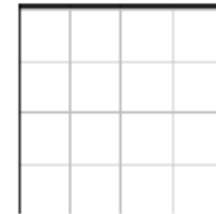
4 parts shaded $\dfrac{4}{16}$

Equivalent fraction =

5 parts shaded $\dfrac{5}{20}$

Equivalent fraction =

Three chillies

Calculate the equivalent fractions. Remember that the numerator and denominator must be multiplied by the same number.

$$\frac{1}{3} = \frac{2}{\Box}$$

$$\frac{1}{3} = \frac{6}{\Box}$$

$$\frac{1}{3} = \frac{\Box}{12}$$

$$\frac{1}{3} = \frac{\Box}{99}$$

$$\frac{1}{6} = \frac{9}{\Box}$$

$$\frac{1}{12} = \frac{3}{\Box}$$

$$\frac{1}{6} = \frac{12}{\Box}$$

$$\frac{1}{12} = \frac{10}{\Box}$$

$$\frac{2}{3} = \frac{\Box}{9} = \frac{12}{\Box} = \frac{\Box}{21}$$

Three chillies

answers

$$\frac{1}{3} = \frac{2}{\boxed{6}}$$

$$\frac{1}{3} = \frac{6}{\boxed{18}}$$

$$\frac{1}{3} = \frac{\boxed{4}}{12}$$

$$\frac{1}{3} = \frac{\boxed{33}}{99}$$

$$\frac{1}{6} = \frac{9}{\boxed{72}}$$

$$\frac{1}{12} = \frac{3}{\boxed{36}}$$

$$\frac{1}{6} = \frac{12}{\boxed{72}}$$

$$\frac{1}{12} = \frac{10}{\boxed{120}}$$

$$\frac{2}{3} = \frac{\boxed{6}}{9} = \frac{12}{\boxed{18}} = \frac{\boxed{14}}{21}$$

Dive deeper 1

Tommy is finding equivalent fractions.

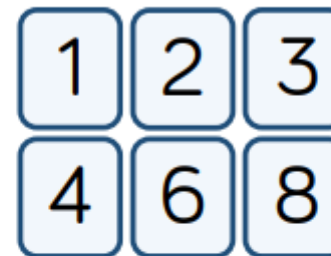$$\frac{3}{4} = \frac{5}{6} = \frac{7}{8} = \frac{9}{10}$$

He says,

I did the same thing to the numerator and the denominator so my fractions are equivalent.

Do you agree with Tommy?
Explain your answer.

Dive deeper 2

Use the digit cards to complete the equivalent fractions.

1 2 3

4 6 8

$$\frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

How many different ways can you find?

Dive deeper 3 (mega challenge)

Circle the fractions that are equivalent to a quarter.

$$\frac{256}{1024} \qquad \frac{51}{206} \qquad \frac{26}{108} \qquad \frac{35}{140} \qquad \frac{86}{322} \qquad \frac{61}{244}$$

Dive deeper 1

Tommy is finding equivalent fractions.

$$\frac{3}{4} = \frac{5}{6} = \frac{7}{8} = \frac{9}{10}$$

He says,

I did the same thing to the numerator and the denominator so my fractions are equivalent.

Do you agree with Tommy?
Explain your answer.

Tommy is wrong. He has added two to the numerator and denominator each time. When you find equivalent fractions you either need to multiply or divide the numerator and denominator by the same number.

Dive deeper 2

Use the digit cards to complete the equivalent fractions.

| 1 | 2 | 3 |
| 4 | 6 | 8 |

$$\frac{\square}{\square} = \frac{\square}{\square}$$
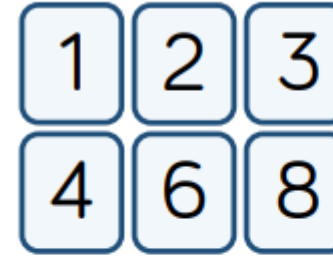
How many different ways can you find?

Possible answers:

$$\frac{1}{2} = \frac{3}{6} , \frac{1}{2} = \frac{4}{8},$$

$$\frac{1}{3} = \frac{2}{6} , \frac{1}{4} = \frac{2}{8},$$

$$\frac{3}{4} = \frac{6}{8} , \frac{2}{3} = \frac{4}{6}$$

Dive deeper 3 (mega challenge)

Circle the fractions that are equivalent to a quarter.

$$\boxed{\frac{256}{1024}} \qquad \frac{51}{206} \qquad \frac{26}{108} \qquad \boxed{\frac{35}{140}} \qquad \frac{86}{322} \qquad \boxed{\frac{61}{244}}$$

Self assessment – how did you do?

- SOME WILL EVEN use multiplication and division to find equivalent fractions with larger denominators

Did you complete the mega challenge?

- SOME will calculate equivalent fractions

Did you get the three chilli questions right?

- MOST will show equivalent fractions using shapes

Did you get the two chilli questions right?

- ALL will recognise and calculate fractions equivalent to a half

Did you get the one chilli questions right?