# Year 4 Maths: fractions and decimals

Week beginning 20/04/20

### Fab four - fluency

- 1. Draw a shape with 2 right angles.
- 2. Draw a shape with one line of symmetry.
- 3. Write 2 fractions equivalent to 1/2.
- 4. 3/8 of 88 =

We are going to be learning about fraction and decimal equivalence (remember equivalence means the same or equal!). Let's start with tenths...

- On the right is an image showing a square divided into tenths. The whole square is ten tenths.
- If I shaded in one part, I would've shaded 1/10 or 0.1 of the whole square.
- If I shaded in two parts, I would've shaded 2/10 or 0.2 of the whole square.
- If I shaded in seven parts, I would've shaded 7/10 or 0.7 of the whole square.
- Can you see how I've made the fractions and decimals equivalent? 1/10 = 0.1, 2/ 10 = 0.2, 7/10 = 0.7



tenths

#### Now let's think about hundredths...

- On the right is an image showing a square divided into hundredths. The whole square is one hundred hundredths.
- If I shaded in one square, I would've shaded 1/100 or 0.01 of the whole square.
- If I shaded in two squares, I would've shaded 2/100 or 0.02 of the whole square.
- If I shaded in thirty six squares, I would've shaded 36/100 or 0.36 of the whole square.
- Can you see how I've made the fractions and decimals equivalent? 1/100 = 0.01, 2/ 100 = 0.02, 36/100 = 0.36



hundredths

#### On a number line, they would look like this:



Activity one: Choose a section to do. Write the equivalent fraction next to the decimal.

| Mild     | Spicy       | Hot       |
|----------|-------------|-----------|
| , 0.50 = | 0.22 =      | 0.07 =    |
| 0.30 =   | 0.87 =      | 1.81 =    |
| 0.64 =   | 0.25 =      | 1.55 =    |
| 0.55 =   | 0.14 =      | 1.38 =    |
| 0.60 =   | ). 0.32 =   | 1. 1.41 = |
|          | . 0.72 =    | . 0.84 =  |
| 0.45 =   | 2. 0.74 =   | . 0.22 =  |
| 0.80 =   | ł. 0.70 = — | . 0.27 =  |
| 0.10 =   | ►. 0.95 =   | . 1.47 =  |

#### If you're finding those easy, try these challenges:



- 1. Draw a shape with 1 obtuse angle.
- 2. Draw a shape with no lines of symmetry.
- 3. Write 2 fractions equivalent to 1/3.
- 4. 5/9 of 27 =

| Let's recap what we  | 0.2  | <u>30</u><br>100 |
|--|------|------------------|
| did yesterday! How<br>quickly can you match<br>these fractions and<br>decimals? You can try<br>to do them in your<br>head. | 0.8  | 8                |
|  | 0.3  | <u>22</u><br>100 |
|  | 0.9  | 2<br>10          |
|  | 0.22 | <u>33</u><br>100 |
|  | 0.08 | <u>9</u><br>10   |
|  | 0.33 | 8 10             |
|  | 0.09 | <u>9</u><br>100  |

## Now let's think about some other fractions and their equivalent decimals...

• We are going to look at finding equivalents to halves and quarters. It helps if we look at a hundred square and think about how many squares are coloured.



In this picture, half the squares are coloured red. We could write:  $\frac{1}{2}$  = red.

How many squares is that out of the whole grid? Well half of 100 (the whole) is 50, so it must be 50 squares. We could write this as a fraction: 50/100.

Can you work out what decimal number would be equivalent?

#### Quarters



- In this picture, a quarter of the squares are coloured blue.
- We could write: <sup>1</sup>/<sub>4</sub> = blue.
- How many squares is that out of the whole grid? We can work it out by doing half of 100 (the whole), which is 50, and then halving it again, which is 25.
- We could write this as a fraction: 25/100.
- Can you work out what decimal number would be equivalent?

Activity two: try these. You can print this slide or just draw the squares on some paper.

1. What is  $\frac{1}{2}$  written as a decimal?



#### 2. What is $\frac{1}{4}$ written as a decimal?



Colour in a quarter of the grid.

How many hundredths have you coloured in?  $\frac{1}{100}$ 

Use a place value grid to write the fractions as decimals.

Therefore,  $\frac{1}{4}$  written as a decimal =

3. What is  $\frac{3}{4}$  written as a decimal?



Colour in three quarters of the grid.

How many hundredths have you coloured in?  $\frac{1}{100}$ 

in? 100

Use a place value grid to write the fractions as decimals.



Therefore,  $\frac{3}{4}$  written as a decimal =

<u>Challenge</u>: *Try these two questions if you want!* 

Put these numbers in order, starting with the smallest.

$$\frac{1}{5}$$
 0.75 0.33  $\frac{1}{2}$   $\frac{4}{10}$   $\frac{5}{10}$ 

Explain your reasoning using diagrams.

| Which is the odd | one out in each | row. Why?     |
|------------------|-----------------|---------------|
| $\frac{1}{2}$    | $\frac{1}{4}$   | $\frac{2}{4}$ |
| 0.25             | 2<br>5          | 0.4           |