

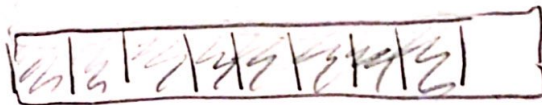
Fraction ÷ Example

Find $\frac{2}{9} \div \frac{8}{9}$.

Recall that we can picture $\frac{2}{9}$ as a block (one) divided up into 9 equal pieces. The number $\frac{2}{9}$ would be 2 of these pieces,

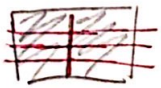


Similarly we can create a way of viewing $\frac{8}{9}$.



Since \div can be thought of as sharing we will share the $\frac{2}{9}$ across the $\frac{8}{9}$. It looks like we'll need to cut up the $\frac{2}{9}$ into smaller pieces to share equally though.

If we share $\frac{1}{4}$ of our $\frac{2}{9}$ pieces we can evenly share $\frac{2}{9}$ across the $\frac{8}{9}$.



share across the $\frac{8}{9}$.

So $\frac{2}{9} \div \frac{8}{9}$ is $\frac{1}{4}$.

OR

Let's turn the division into one large fraction:

$$\frac{2}{9} \div \frac{8}{9} = \frac{\frac{2}{9}}{\frac{8}{9}}$$

Recall we can multiply the numerator (top) & denominator (bottom) and have the same fraction. Let's

$$\frac{9}{8} \times \frac{8}{9} = \frac{9 \times 8}{8 \times 9} = 1$$

multiply by $\frac{9}{8}$ since

$$\text{So } \frac{\frac{2}{9} \times \frac{9}{8}}{\frac{8}{9} \times \frac{9}{8}} = \frac{\frac{2 \times 9}{9 \times 8}}{1} = \frac{2 \times 9}{9 \times 8} = \frac{2}{8} = \frac{2}{2 \times 4} = \frac{1}{4} \quad \text{So } \frac{1}{4}$$