

# COUNTDOWN CHALLENGE

## Numbers: Proportions & Percent: Proportions Intro

As you saw in the video, a *proportion* is two equal ratios. We saw that  $\frac{1}{2} : \frac{2}{4}$  is a proportion, as is  $\frac{2}{4} : \frac{4}{8}$  and  $\frac{4}{8} : \frac{8}{16}$ . Use cross multiplication to prove that  $\frac{2}{4} = \frac{8}{16}$  and then determine the next proportion.

$$\frac{2}{4} \times \frac{8}{16}$$

$$\frac{8}{16} = \frac{\quad}{32}$$

Below are sets of ratios in fraction form. Determine if they are proportions by using an = sign if they are equal and a  $\neq$  if they are not. Hint: use cross multiplication to help determine if two fractions are equal.

$\frac{1}{3} \quad \frac{3}{4}$	$\frac{4}{5} \quad \frac{8}{15}$	$\frac{9}{12} \quad \frac{3}{4}$	$\frac{6}{12} \quad \frac{2}{3}$
$\frac{8}{12} \quad \frac{2}{3}$	$\frac{5}{3} \quad \frac{15}{9}$	$\frac{12}{2} \quad \frac{18}{1}$	

Now use your skills to complete the proportions by filling in the missing numbers.

$\frac{3}{4} = \frac{6}{\quad}$	$\frac{1}{2} = \frac{\quad}{14}$	$\frac{16}{12} = \frac{\quad}{4}$	$\frac{2}{3} = \frac{6}{\quad}$
$\frac{\quad}{3} = \frac{12}{9}$	$\frac{\quad}{5} = \frac{12}{10}$	$\frac{6}{\quad} = \frac{18}{21}$	$\frac{\quad}{4} = \frac{8}{\quad}$ *

\*There are many possible answers to this one. Can you come up with more than one?