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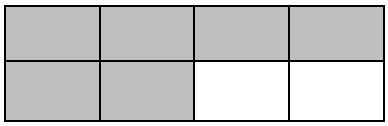
Comparing Unlike Fractions- Step-by-Step Lesson

Compare the following fractions by using the symbol >, <, or =.

$$\frac{6}{8} \quad \text{———} \quad \frac{2}{6}$$

The fractions can be thought of as sets of blocks. Some blocks are colored, while others are clear. We visualize the blocks below.



$\frac{6}{8}$ $\frac{2}{6}$

There are a different number of blocks in each set. Also, a different number of the blocks are colored. What the problem is asking us is which block set is more complete or closer to 1 full set of blocks?

It is very tough to compare these block sets because there are a different number of blocks in the set. What if we were able to get the same number of blocks in each set? We can easily do that by finding a number that each denominator evenly goes into. In this case, 24 works.

8 goes into 24; 3 times.

This would mean that we multiply the numerator by 3.

$$\frac{6}{8} \quad \textbf{x 3} \quad = \frac{18}{24}$$

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6 goes into 24; 4 times.

This would mean that we multiply the numerator by 4.

$$\frac{2}{6} \quad \textbf{x 4} \quad = \frac{8}{24}$$

We can now restate this problem from:

$$\frac{6}{8} \text{ ———— } \frac{2}{6}$$

to:

$$\frac{18}{24} \text{ ———— } \frac{8}{24}$$

We just need to compare the numerators now. (18 > 8)

$$\frac{18}{24} > \frac{8}{24}$$

or

$$\frac{6}{8} > \frac{2}{6}$$