Fractions on a number line

1. Draw an arrow to show the fractions on the number lines.
   a) \( \frac{1}{2} \)
   - [Diagram showing \( \frac{1}{2} \) on the number line]
   b) \( \frac{1}{3} \)
   - [Diagram showing \( \frac{1}{3} \) on the number line]
   c) \( \frac{1}{4} \)
   - [Diagram showing \( \frac{1}{4} \) on the number line]

Are your answers accurate or are they estimates?

2. Write \(<\), \(>\) or \(=\) to compare the fractions.
   a) \( \frac{1}{2} \) \(>\) \( \frac{1}{4} \)
   b) \( \frac{1}{4} \) \(<\) \( \frac{1}{3} \)
   c) \( \frac{1}{3} \) \(<\) \( \frac{1}{2} \)

3. Write the missing fractions on the number lines.
   a) [Number line with fractions] 0 \(\frac{1}{2}\) 1 \(\frac{2}{2}\) 2 \(\frac{3}{3}\) 3
   b) [Number line with fractions] 0 \(\frac{1}{3}\) 1 \(\frac{2}{3}\) 2
   c) [Number line with fractions] 0 \(\frac{1}{4}\) 1 \(\frac{2}{4}\) 2 \(\frac{3}{4}\) 3
   d) Write three fractions that are equivalent to one whole.
      Use the number lines to help you.
      \( \frac{4}{4} \), \( \frac{3}{3} \), \( \frac{2}{2} \)

   What do you notice?
   The numerator is equal to the denominator.

   Talk about it with a partner.
4. Draw an arrow to estimate where each fraction belongs on the number line.

a) \(\frac{3}{4}\)

b) 1 and \(\frac{2}{3}\)

5. Write each fraction under the correct heading.

\[
\begin{array}{c|c|c}
\text{Less than one whole} & \text{Equal to one whole} & \text{More than one whole} \\
\hline
\frac{2}{3} & \frac{4}{4} & \frac{5}{3} \\
\frac{3}{4} & \frac{7}{4} & \frac{8}{8} \\
\frac{1}{8} & & \\
\frac{3}{3} & & \\
\end{array}
\]

6. What fraction is shown in each diagram? Draw an arrow to show the fraction on the number line.

a) \[
\begin{array}{c}
\text{Number line:} \\
0 & \frac{1}{8} & \frac{1}{4} & \frac{1}{2} & 1 \\
\text{Diagram:} \\
\frac{3}{4} \\
\end{array}
\]

b) \[
\begin{array}{c}
\text{Number line:} \\
0 & \frac{1}{2} & \frac{3}{4} & 1 & \frac{5}{4} & 2 & \frac{7}{4} & \frac{9}{4} & \frac{5}{2} & 3 \\
\text{Diagram:} \\
\frac{5}{3} \\
\end{array}
\]

7. One eighth is greater than one quarter. Do you agree with Teddy? \(\text{No}\)

Use the number line to show why.

\[
\begin{array}{c}
\text{Number line:} \\
0 & \frac{1}{8} & \frac{1}{4} & 1 \\
\text{Diagram:} \\
\frac{1}{8} & \frac{1}{4} \\
\end{array}
\]

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