

Number Line

Number & Operations · Grade 3

Score: _____ / 10

★ Hard · 10 Questions

Solve each problem. Show your work in the space provided. Write your answer on the line.

1. What fraction is located exactly halfway between $\frac{1}{4}$ and $\frac{3}{4}$ on a number line?

Answer: _____

2. On a number line from 0 to 1:
Which is greater, $\frac{5}{8}$ or $\frac{3}{5}$?
How do you know?

Answer: _____

3. On a number line from 0 to 1 in eighths, list all 9 tick marks.

Answer: _____

4. Which fraction is closer to 1 on a number line: $\frac{3}{4}$ or $\frac{4}{5}$?

Answer: _____

5. Order from least to greatest:

$\frac{2}{3}$, $\frac{1}{6}$, $\frac{1}{2}$, $\frac{5}{6}$

Answer: _____

6. What fraction is halfway between 0 and $\frac{1}{2}$?

Answer: _____

7. What fraction is halfway between $\frac{1}{2}$ and 1?

Answer: _____

8. On a number line, which is greater: $\frac{7}{8}$ or $\frac{6}{8}$?

Answer: _____

9. List all the eighths between $\frac{1}{4}$ and $\frac{3}{4}$ (not inclusive).

Answer: _____

10. On a number line, which is farther from 0: $\frac{5}{6}$ or $\frac{2}{3}$?

Answer: _____

Answer Key

Number Line — Hard

1. **$\frac{1}{2}$**

Midpoint = $(\frac{1}{4} + \frac{3}{4}) \div 2 = (\frac{4}{4}) \div 2 = 1 \div 2 = \frac{1}{2}$.

2. **$\frac{5}{8}$ is greater. $\frac{5}{8} = 0.625$ and $\frac{3}{5} = 0.60$. Since $0.625 > 0.60$, $\frac{5}{8} > \frac{3}{5}$.**

Convert to decimals: $\frac{5}{8} = 0.625$, $\frac{3}{5} = 0.600$. Since $0.625 > 0.600$, $\frac{5}{8}$ is farther right on the number line.

3. **0, $\frac{1}{8}$, $\frac{2}{8}$, $\frac{3}{8}$, $\frac{4}{8}$, $\frac{5}{8}$, $\frac{6}{8}$, $\frac{7}{8}$, 1**

Tick marks at every $\frac{1}{8}$ step: $0/8$, $1/8$, ..., $8/8 = 1$.

4. **$\frac{4}{5}$**

$\frac{3}{4} = 0.75$ (distance 0.25). $\frac{4}{5} = 0.80$ (distance 0.20). $\frac{4}{5}$ is closer.

5. **$\frac{1}{6}$, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{5}{6}$**

Convert to sixths: $\frac{1}{6}$, $\frac{3}{6}$, $\frac{4}{6}$, $\frac{5}{6}$. Order: $\frac{1}{6} < \frac{3}{6} (= \frac{1}{2}) < \frac{4}{6} (= \frac{2}{3}) < \frac{5}{6}$.

6. **$\frac{1}{4}$**

$\frac{1}{4}$ sits at the midpoint of 0 and $\frac{1}{2}$.

7. **$\frac{3}{4}$**

$\frac{3}{4}$ sits at the midpoint of $\frac{1}{2}$ and 1.

8. **$\frac{7}{8}$**

Same denominator: $7 > 6$, so $\frac{7}{8} > \frac{6}{8}$.

9. **$\frac{3}{8}$, $\frac{4}{8}$, $\frac{5}{8}$**

$\frac{1}{4} = \frac{2}{8}$ and $\frac{3}{4} = \frac{6}{8}$. Between them: $\frac{3}{8}$, $\frac{4}{8}$, $\frac{5}{8}$.

10. **$\frac{5}{6}$**

LCD=6. $\frac{5}{6}$ vs $\frac{4}{6}$. $\frac{5}{6}$ is farther right, so farther from 0.