

Push Tasks – Answers



Convert mixed numbers to improper fractions first, and check a claimed quotient by working it out yourself.

1. $1\frac{1}{2} \div \frac{3}{4}$.

Solution

$$1\frac{1}{2} \div \frac{3}{4} = \frac{3}{2} \div \frac{3}{4} = \frac{3}{2} \times \frac{4}{3} = \frac{12}{6} = 2$$

3. A jug is $\frac{3}{4}$ full. Each pour uses $\frac{1}{8}$ of the jug. How many pours is that?

Solution

$$\frac{3}{4} \div \frac{1}{8} = \frac{3}{4} \times 8 = 6 \text{ pours.}$$

2. A student says $\frac{4}{5} \div \frac{2}{3} = \frac{8}{15}$. Are they correct? Explain.

Solution

No: $\frac{4}{5} \div \frac{2}{3} = \frac{4}{5} \times \frac{3}{2} = \frac{12}{10} = \frac{6}{5}$; $\frac{8}{15}$ is $\frac{4}{5} \times \frac{2}{3}$ (multiplying, not dividing).

4. Find a fraction so that $\frac{2}{3} \div \square = \frac{10}{9}$.

Solution

$$\square = \frac{3}{5}: \frac{2}{3} \div \frac{3}{5} = \frac{2}{3} \times \frac{5}{3} = \frac{10}{9}$$

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Reason about which quotient is greater, and identify the odd one out among similar-looking calculations.

5. Which is greater: $\frac{5}{6} \div \frac{1}{3}$ or $\frac{3}{4} \div \frac{1}{2}$? Show enough working to justify.

Solution

$\frac{5}{6} \div \frac{1}{3} = \frac{5}{6} \times 3 = \frac{5}{2}$; $\frac{3}{4} \div \frac{1}{2} = \frac{3}{2}$. $\frac{5}{6} \div \frac{1}{3}$ is greater.

7. Which does not belong: $\frac{1}{2} \div \frac{1}{4}$, $2 \div \frac{1}{2}$, $\frac{3}{4} \div \frac{3}{8}$, $\frac{5}{6} \div \frac{5}{6}$?

Solution

Values: 2, 4, 2, 1. $\frac{5}{6} \div \frac{5}{6} = 1$ does not belong – it is the only one equal to a fraction divided by itself.

6. Is $\frac{6}{7} \div \frac{3}{14} = 4$ correct? Explain.

Solution

Yes: $\frac{6}{7} \div \frac{3}{14} = \frac{6}{7} \times \frac{14}{3} = \frac{84}{21} = 4$.

8. Explain why $\frac{4}{9} \div \frac{2}{3}$ can be rewritten as $\frac{4}{9} \times \frac{3}{2}$.

Solution

Dividing by a fraction equals multiplying by its reciprocal; the reciprocal of $\frac{2}{3}$ is $\frac{3}{2}$.