

Topic: Complex fractions**Question:** Simplify the expression.

$$\frac{\left(\frac{1}{2}\right)}{\left(\frac{1}{3}\right)}$$

Answer choices:

A $\frac{2}{3}$

B $\frac{3}{2}$

C $\frac{1}{5}$

D $\frac{2}{6}$



Solution: B

Instead of dividing by the fraction in the denominator, we can multiply by its reciprocal.

$$\frac{\left(\frac{1}{2}\right)}{\left(\frac{1}{3}\right)}$$

$$\frac{1}{2} \cdot \frac{3}{1}$$

$$\frac{1 \cdot 3}{2 \cdot 1}$$

$$\frac{3}{2}$$



Topic: Complex fractions**Question:** Simplify the expression.

$$\frac{\left(\frac{x}{m}\right)}{d}$$

Answer choices:

A $\frac{dx}{m}$

B $\frac{x}{dm}$

C $\frac{md}{x}$

D $\frac{m}{dx}$



Solution: B

We have to rewrite the given fraction.

$$\frac{\left(\frac{x}{m}\right)}{d}$$

$$\frac{\left(\frac{x}{m}\right)}{\left(\frac{d}{1}\right)}$$

Now that we have a fraction divided by another fraction, instead of dividing by the fraction that was originally in the denominator, we can multiply by its reciprocal.

$$\frac{x}{m} \cdot \frac{1}{d}$$

$$\frac{1x}{dm}$$

$$\frac{x}{dm}$$



Topic: Complex fractions**Question:** Simplify the expression.

$$\frac{\left(\frac{x}{a+b}\right)}{\left(\frac{m}{a+b}\right)}$$

Answer choices:

A $\frac{a}{b}$

B $\frac{m}{x}$

C x

D $\frac{x}{m}$



Solution: D

Instead of dividing by the fraction in the denominator, we can multiply by its reciprocal.

$$\frac{\left(\frac{x}{a+b}\right)}{\left(\frac{m}{a+b}\right)}$$

$$\frac{x}{a+b} \cdot \frac{a+b}{m}$$

$$\frac{x(a+b)}{m(a+b)}$$

$$\frac{x}{m}$$

