



Solve simple rational equations

- 1** What does this equation become when $d=6$, $b=3$

$$\frac{3d}{6b}$$

A

$$\frac{3 \cdot 6}{6 \cdot 3}$$

B

$$\frac{3+6}{6+3}$$

- 3** On which range is the function not differentiable (undefined)?

$$f(x) = \sqrt{x-3}$$

A $x > 3$

B $x < 3$

C $x = 3$

D $x < -3$

- 4** Set up the common denominator by multiplying each term by the missing factor over itself.

$$\frac{8}{x-5} - \frac{7}{x}$$

A $\frac{8}{x-5} \cdot \frac{x-5}{x-5} - \frac{7}{x} \cdot \frac{x}{x}$

B $\frac{8}{x-5} \cdot \frac{x}{x} - \frac{7}{x} \cdot \frac{x}{x}$

C $\frac{8}{x-5} \cdot \frac{x}{x} + \frac{7}{x} \cdot \frac{x-5}{x-5}$

D $\frac{8}{x-5} \cdot \frac{x}{x} - \frac{7}{x} \cdot \frac{x-5}{x-5}$

- 6** Is this potential solution extraneous?

$$\frac{x^2 + 2x + 1}{x + 1} = -3$$

Potential solution: $x = -4$

A Yes

B No

- 2** Solve the fraction for 'x' in terms of the variables and reduce.

$$t = \frac{o}{x}$$

A

$$x = \frac{o}{t}$$

B

$$x = \frac{t}{o}$$

C

$$x = t \cdot o$$

- 5** One of these potential solutions is extraneous. Select the extraneous solution.

$$\frac{x^2 - 25}{x - 5} = 2$$

Potential solutions: $x = -3$, $x = 5$

A $x = 5$

B $x = -3$

- 7** Solve for the variable in the equation

$$\frac{125}{7y-3} = 5$$

A $y = 6$

B $y = 4$

C $y = 7$

D $y = 2$

E $y = 3$

F $y = 5$

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What number can be put in the circle to make this equation correct?

$$\frac{7 \cdot \bigcirc + 5}{2 \cdot \bigcirc} = 4$$

A $\bigcirc = 5$

B $\bigcirc = 6$

C $\bigcirc = 8$

D $\bigcirc = 3$

E $\bigcirc = 7$

F $\bigcirc = 4$

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Find the value of z without using a calculator

$$\frac{2z^2 + 4z + 2}{z + 1} = 14$$

A $z = 1$

B $z = 10$

C $z = 7$

D $z = 3$

E $z = 6$

F $z = 5$

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Solve the fraction for 'x' in terms of the variables and reduce.

$$2a = \frac{4b}{3x}$$

A $x = \frac{a \cdot b}{6}$

B $x = \frac{2a}{3b}$

C $x = \frac{2b}{3a}$

D $x = \frac{8a \cdot b}{3}$

E $x = \frac{b}{a}$

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Find the value of z without using a calculator

$$\frac{z^2 - 36}{z + 6} = 7$$

A $z = 19$

B $z = 10$

C $z = 14$

D $z = 8$

E $z = 13$

F $z = 6$

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Solve for the variable in the equation

$$\frac{-15}{2y - 7} = 5$$

A $y = 3$

B $y = 1$

C $y = 5$

D $y = 4$

E $y = 2$

F $y = 0$