

ALGEBRA: SOLVING EQUATIONS WITH FRACTIONS**Best Guess Mastery Worksheet (Target Grade 4/5)****I Do**

Solve $\frac{3x-2}{4} = 5 - x$.

Show clear algebraic working.

$x =$

We Do

Solve $\frac{2x+5}{3} = 7 - x$.

Show clear algebraic working.

$x =$

You Do 1

Solve $\frac{4x-1}{5} = 3 - x$.

Show clear algebraic working.

$x =$

You Do 2

Solve $\frac{5x+3}{2} = 11 - x$.

Show clear algebraic working.

$x =$

ALGEBRA: SOLVING EQUATIONS WITH FRACTIONS**Best Guess Mastery Worksheet (Target Grade 4/5)****Challenge 1**

Solve $\frac{3x+4}{2} = \frac{2x-1}{3}$.

Show clear algebraic working.

$x =$

Challenge 2

Solve $\frac{5x-2}{4} = \frac{3x+1}{2}$.

Show clear algebraic working.

$x =$

Challenge 3

Solve $\frac{x+5}{3} = \frac{2x-3}{4}$.

Show clear algebraic working.

$x =$

Challenge 4

Solve $\frac{4x-1}{5} = \frac{2x+3}{2}$.

Show clear algebraic working.

$x =$

Answers & Worked Solutions

I Do:

Multiply by 4: $3x - 2 = 4(5 - x)$

Expand brackets: $3x - 2 = 20 - 4x$

Add 4x: $7x - 2 = 20 \rightarrow 7x = 22 \rightarrow x = \frac{22}{7}$

We Do:

Multiply by 3: $2x + 5 = 3(7 - x)$

Expand brackets: $2x + 5 = 21 - 3x$

Add 3x: $5x + 5 = 21 \rightarrow 5x = 16 \rightarrow x = \frac{16}{5}$ (or 3.2)

You Do 1:

Multiply by 5: $4x - 1 = 5(3 - x)$

Expand brackets: $4x - 1 = 15 - 5x$

Add 5x: $9x - 1 = 15 \rightarrow 9x = 16 \rightarrow x = \frac{16}{9}$

You Do 2:

Multiply by 2: $5x + 3 = 2(11 - x)$

Expand brackets: $5x + 3 = 22 - 2x$

Add 2x: $7x + 3 = 22 \rightarrow 7x = 19 \rightarrow x = \frac{19}{7}$

Challenge 1:

Cross multiply: $3(3x + 4) = 2(2x - 1)$

Expand: $9x + 12 = 4x - 2$

Subtract 4x: $5x + 12 = -2 \rightarrow 5x = -14 \rightarrow x = -\frac{14}{5}$ (or -2.8)

Challenge 2:

Cross multiply: $2(5x - 2) = 4(3x + 1)$

Expand: $10x - 4 = 12x + 4$

Subtract 10x: $-4 = 2x + 4 \rightarrow 2x = -8 \rightarrow x = -4$

Challenge 3:

Cross multiply: $4(x + 5) = 3(2x - 3)$

Expand: $4x + 20 = 6x - 9$

Subtract 4x: $20 = 2x - 9 \rightarrow 2x = 29 \rightarrow x = \frac{29}{2}$ (or 14.5)

Challenge 4:

Cross multiply: $2(4x - 1) = 5(2x + 3)$

Expand: $8x - 2 = 10x + 15$

Subtract 8x: $-2 = 2x + 15 \rightarrow 2x = -17 \rightarrow x = -\frac{17}{2}$ (or -8.5)