Algebraic Fractions Worksheet

I Do

Show that

$$\frac{9x^2 - 25}{x - 4} \div \frac{3x^2 + 11x + 10}{x^2 - 2x - 8} - (5 + 3x) = n$$

where n is an integer to be found. Show clear algebraic working.

We Do — Guided Practice

Show that

$$\frac{4x^2 - 9}{2x + 1} \div \frac{2x^2 + 5x + 3}{2x^2 + 3x + 1} - (2x - 7) = n$$

where n is an integer to be found. Show clear algebraic working.

You Do — Independent Practice

Question 1

Show that

$$\frac{25x^2 - 1}{x + 5} \div \frac{5x^2 + 14x - 3}{x^2 + 8x + 15} - (5x - 2) = n$$

where n is an integer to be found. Show clear algebraic working.

Question 2

Show that

$$\frac{16x^2 - 49}{x - 1} \div \frac{4x^2 - 15x + 14}{x^2 - 3x + 2} - (4x + 11) = n$$

where n is an integer to be found. Show clear algebraic working.

Question 3

Show that

$$\frac{9x^2 - 4}{x - 3} \div \frac{3x^2 - 7x - 6}{x^2 - 6x + 9} - (3x - 5) = n$$

where n is an integer to be found. Show clear algebraic working.

Answers

- **"I Do" Answer:** $n = -10$
- **"We Do" Answer:** $n = 4$
- **"You Do" Q1 Answer:** $n = 3$
- **"You Do" Q2 Answer:** $n = -4$
- **"You Do" Q3 Answer:** $n = 7$