Simplifying algebraic fractions

1

Simplify fully $\frac{3x + 12}{x + 4}$

$= \frac{3(x + 4)}{(x + 4)}$

Answer _____

2

Simplify fully $\frac{6x + 12}{5x + 10}$

$= \frac{6(x + 2)}{\quad}$

Answer _____

3

Simplify fully $\frac{x^2 + 7x}{4x + 28}$

$= \frac{\quad}{\quad}$

Answer _____

4

Simplify fully $\frac{8x + 12}{2x + 3}$

$= \frac{\quad}{\quad}$

Answer _____

5

Simplify fully $\frac{x^2 + 6x + 8}{x + 4}$

$= \frac{(x + 4)(\quad)}{(x + 4)}$

Answer _____

6

Simplify fully $\frac{x^2 + 10x + 21}{x + 3}$

$= \frac{\quad}{\quad}$

Answer _____

7

Simplify fully $\frac{x^2 - 2x - 15}{x - 5}$

$= \frac{\quad}{\quad}$

Answer _____

8

Sam simplifies $\frac{x^2 + 4x + 3}{x + 3}$ to $x^2 + 4x + 1$. Explain his mistake. Simplify it fully.

Answer _____

Simplifying algebraic fractions *further practice*

9

Simplify fully $\frac{7x + 14}{x + 2}$

Answer _____

10

Simplify fully $\frac{x^2 + 9x + 20}{x + 5}$

Answer _____

11

Simplify fully $\frac{x^2 - 16}{x + 4}$

Answer _____

12

Simplify fully $\frac{x + 3}{x^2 + 5x + 6}$

Answer _____

13

A rectangle has an area of $(x^2 + 8x + 15)$ cm² and a width of $(x + 3)$ cm. Find its length.

Answer _____

14

Simplify fully $\frac{x^2 + 6x}{x^2 + 4x - 12}$

Answer _____

15

$\frac{x^2 + kx + 12}{x + 3}$ simplifies to $x + 4$.

Find the value of k.

Answer _____

16

Ali says $\frac{x + 8}{x + 4}$ simplifies to 2.

Substitute $x = 1$ to show that he is wrong. Explain his mistake.

Answer _____