Rational expressions: meaning, domain and cancellation — Further practice

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Further practice 11

Simplify and retain every restriction from the original expression.

$$\frac{3x}{6x}$$

Further practice 12

Simplify and retain every restriction from the original expression.

$$\frac{x^2-1}{x-1}$$

Further practice 13

Simplify and retain every restriction from the original expression.

$$\frac{x^2+2x}{x+2}$$

Further practice 14

Simplify and retain every restriction from the original expression.

$$\frac{x-1}{x+1}$$

Extension 15

After cancellation the formula is x+2. Explain why it is not the same original expression on ALL real inputs.

$$\frac{x^2-4}{x-2}$$

Extension 16

Simplify, and explain why x=1 remains forbidden even though the final formula is just x.

$$\frac{x^2 - x}{x - 1}$$