Rational equations: checking and applications — Further practice

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Further practice 11

Solve the equation. State the restrictions and check every candidate in the original equation.

$$\frac{3}{x^2-4}=\frac{1}{x-2}$$

Further practice 12

Solve the equation. State the restrictions and check every candidate in the original equation.

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

Further practice 13

A alone takes 6 days and B alone takes 3 days. Let x be their days working together. Form and solve a work equation.

Further practice 14

Two trips take equal time:180 km at x km/h and 240 km at (x+20) km/h. Find x.

Extension 15

A alone takes 8 days, and A+B together take 3 days. How many days does B take alone? Let this number be x.

Extension 16

A cyclist travels 12 km at x km/h. A bus travels the same route at 2x km/h but starts 1/2 hour later; they arrive together. Find x.