Equations: meaning, solutions and equal operations — Further practice

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Further practice 11

Does 5x + 2 = 17 fit the definition of an equation in an unknown? Identify both required features.

Further practice 12

From x − 4 = 9, add 4 to both sides. Is the result x = 13 equivalent?

Further practice 13

From −2x = 10, divide both sides by −2. Explain why x = −5 is equivalent.

Further practice 14

Multiplying x = 3 by 0 gives 0 = 0. Do these two equations have the same solutions? Give a concrete test value.

Extension 15

Does every real value of x solve x + x = 2x? Explain without choosing just one test value.

$$x + x = 2x$$

Extension 16

Can 2x + 1 = 2x + 4 have a solution? Apply the same subtraction on both sides and explain.

$$2x + 1 = 2x + 4$$