

Mathematics

Algebra - Solving Equations - Part 1

Practice Questions

- a) $2x + 5 = 17$ $x = \underline{\quad}$
- b) $3x - 4 = 11$ $x = \underline{\quad}$
- c) $4x + 7 = 31$ $x = \underline{\quad}$
- d) $5x + 2 = 22$ $x = \underline{\quad}$
- e) $2x + 3 = 9$ $x = \underline{\quad}$
- f) $6x + 3 = 27$ $x = \underline{\quad}$
- g) $4x - 8 = 12$ $x = \underline{\quad}$
- h) $8x + 5 = 53$ $x = \underline{\quad}$
- i) $3x + 9 = 30$ $x = \underline{\quad}$
- j) $7x - 6 = 43$ $x = \underline{\quad}$
- k) $9x + 4 = 49$ $x = \underline{\quad}$
- l) $2x - 7 = 11$ $x = \underline{\quad}$
- m) $5x + 12 = 37$ $x = \underline{\quad}$
- n) $6x - 5 = 31$ $x = \underline{\quad}$
- o) $10x + 9 = 99$ $x = \underline{\quad}$

Now try this...

A shop sells prints for £25 and charges £17 for postage and packaging on top. Milly spends £192 on her order. How many prints did she buy? _____



What do I do?



When solving equations, you'll be asked to solve an unknown quantity that has been represented by a letter or symbol.

When working through the question, always be mindful to put the equals sign in the middle and whatever you do to one side of the '=' sign, you must do to the other side.

Example:

The inverse of addition is subtraction. To eliminate the +5, we'll need to -5.

Firstly, get 2x on it's own. Minus 5 from both sides.

$$2x + 5 = 17$$

$$-5 \qquad -5$$

$$2x = 12$$

$$\div 2 \qquad \div 2$$

$$x = 6$$

Now we need x on it's own. 2x means TWO times x, so we need to use our inverse and divide by two!

Top Tips!



You could be asked to:

- Form an equation from a written problem
- Solve an equation by stating what a letter or symbol means
- There might be an unknown value on one side or both sides of the equals sign.

What skills do I need to improve?



Doing lots of practice questions will help with becoming familiar with question types but what else can you do to improve in this area?

- Lots of practice! Working systematically and neatly will help you to work through the question without making silly mistakes.

Ready for more challenging questions?
Try Solving Equations - Part 2.

Mathematics

Algebra - Solving Equations - Part 1

Answers

a) $x = 6$

b) $x = 5$

c) $x = 6$

d) $x = 4$

e) $x = 3$

f) $x = 4$

g) $x = 5$

h) $x = 6$

i) $x = 7$

j) $x = 7$

k) $x = 5$

l) $x = 9$

m) $x = 5$

n) $x = 6$

o) $x = 9$



Milly bought 7 prints.

$$25x + 17 = 192 \quad x = 7$$

