

Maths.scot



National 5 Maths

Changing the Subject

SQA past paper and specimen paper
questions and answers by topic

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Change the subject of the formula $p = \frac{mv^2}{2}$ to v .

3

Answer:

$$v = \sqrt{\frac{2p}{m}}$$

National 5 Maths
SQA 2014 Paper 2
Question 11

Change the subject of the formula $s = ut + \frac{1}{2}at^2$ to a .

3

Answer:

$$a = \frac{2(s - ut)}{t^2}$$

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SQA 2016 Paper 2
Question 12

Change the subject of the formula $L = \sqrt{4kt - p}$ to k .

3

Answer:

$$k = \frac{L^2 + p}{4t}$$

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SQA 2017 Paper 1
Question 10

Change the subject of the formula $F = \frac{t^2 + 4b}{c}$ to b .

3

Answer:

$$b = \frac{Fc - t^2}{4}$$

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SQA 2018 Paper 1
Question 14

Change the subject of the formula $y = g\sqrt{x} + h$ to x .

3

Answer:

$$x = \left(\frac{y-h}{g} \right)^2$$

The area of a trapezium is given by the formula

$$A = \frac{1}{2}h(x + y).$$

Make x the subject of the formula.

3

Answer:

$$x = \frac{2A}{h} - y$$

or

$$x = \frac{2A - hy}{h}$$

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SQA 2021 Paper 2
Question 10

Change the subject of the formula $d = \sqrt{\frac{3h}{2}}$ to h .

3

Answer:

$$h = \frac{2d^2}{3}$$

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SQA 2022 Paper 1
Question 7

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Change the subject of the formula $D = \frac{B+4}{C^2}$ to B .

2

Answer:

$$B = C^2D - 4 \text{ or equivalent}$$

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SQA 2023 Paper 2
Question 7

Change the subject of the formula $P = \frac{1}{3}mn - r$ to m .

3

Answer:

$$m = \frac{3(P+r)}{n} \text{ or equivalent}$$

Change the subject of the formula $f = \frac{2d+3}{e}$ to d .

3

Answer:

$$d = \frac{ef - 3}{2}$$

Other acceptable forms:

$$d = \frac{e \times f - 3}{2} \quad \text{or} \quad d = (ef - 3) \div 2 \quad \text{or} \quad d = \frac{ef}{2} - \frac{3}{2}$$

National 5 Maths
SQA 2025 Paper 2
Question 9

Change the subject of the formula $B = \frac{1}{4}kc^2 - 3c$ to k .

3

Answer:

$$k = \frac{4(B + 3c)}{c^2} \text{ or equivalent}$$

Also acceptable:

$$k = \frac{4B}{c^2} + \frac{12}{c}$$