

Maths for Physics

Manipulation

In each of the following questions, make “a” the subject of the equation (that means get it so that a = ...)

- 1 $B = a p$
- 2 $Y = ka$
- 3 $C = a/g$
- 4 $4 = r/a$
- 5 $w = a + p$
- 6 $e = y + a$
- 7 $f = l - a$
- 8 $h = a + w + x$
- 9 $a + w = n + b$
- 10 $b + c - a = d + 5$

Square and Square Roots

Use your calculator to solve the following expressions:

- 1 2^2
- 2 $\sqrt{2.000}$
- 3 $(2.997 \times 10^8)^2$
- 4 $\sqrt{3.142 \times 10^8}$
- 5 $(2 + 3)^2$
- 6 $\sqrt{(13 - 4)}$
- 7 $(3.14 \times 10^9 - 2.1 \times 10^8)^2$
- 8 $\sqrt{(1.3 \times 10^{12} - 4.2 \times 10^{11})}$
- 9 $(3.21 \times 10^9 - 9.6 \times 10^8)^2 / (3.19 \times 10^{-1} - 9.6 \times 10^{-2})^2$
- 10 $\sqrt{(2.6 \times 10^7 + 4.2 \times 10^6)} / \sqrt{3.12 \times 10^{-2}}$

Calculator Arithmetic

Adding, subtracting, multiplying and dividing in the right order

Use your calculator to solve these expressions and jot down any intermediary answers.

1 $(2 + 4) \times (3 + 1)$

2 $2(3 + 4)$

3 $10 / (5 - 3)$

4 $(10 / 5) - 3$

5 $(8 - 4) / (12 - 8)$

6 $2(12 - 6) / (6 - 2)$

7 $3(10 - 6) / 2(12 - 10)$

8 $6 + 12(5 - 3)$

9 $7 - 3(9 - 2^2)$

10 $(2^2 + 4^2) / (2^2 - 4^2 - 2)$