Rearranging Formulae *Fluency*

ANSWERS

Make *x* the subject

1 $y = x^2 + 5$ $x = \pm\sqrt{y - 5}$

2 $a = 3x^2$ $x = \pm\sqrt{\frac{a}{3}}$

3 $p = x^2 - q$ $x = \pm\sqrt{p + q}$

4 $y = \frac{x^2}{4}$ $x = \pm 2\sqrt{y}$

5 $k = 2x^2 - 7$ $x = \pm\sqrt{\frac{k + 7}{2}}$

6 $t = x^3 + c$ $x = \sqrt[3]{t - c}$

Make *x* the subject

7 $y = \sqrt{x} + 3$ $x = (y - 3)^2$

8 $a = 4\sqrt{x}$ $x = \frac{a^2}{16}$

9 $p = \sqrt{x + q}$ $x = p^2 - q$

10 $y = \sqrt{2x - 5}$ $x = \frac{y^2 + 5}{2}$

11 $k = \sqrt{\frac{x}{3}}$ $x = 3k^2$

12 $t = 2\sqrt{x} - c$ $x = \frac{(t + c)^2}{4}$

Make *x* the subject

13 $y = (x + 3)^2$ $x = -3 \pm \sqrt{y}$

14 $a = (x - c)^2$ $x = c \pm \sqrt{a}$

15 $y = 2(x - 1)^2$ $x = 1 \pm \sqrt{\frac{y}{2}}$

16 $p = (x + q)^2 - r$ $x = -q \pm \sqrt{p + r}$

17 $k = 3(x + 4)^2 + 1$ $x = -4 \pm \sqrt{\frac{k - 1}{3}}$

18 $t = \frac{(x - 5)^2}{2}$ $x = 5 \pm \sqrt{2t}$

Make *x* the subject

19 $y = \frac{5}{x^2}$ $x = \pm\sqrt{\frac{5}{y}}$

20 $k = \frac{2}{\sqrt{x}}$ $x = \frac{4}{k^2}$

21 $a = \frac{c}{x^2} + 1$ $x = \pm\sqrt{\frac{c}{a - 1}}$

22 $m = \frac{6}{x^3}$ $x = \sqrt[3]{\frac{6}{m}}$

23 $t = \frac{k}{\sqrt{x + 1}}$ $x = \frac{k^2}{t^2} - 1$

24 $y = \frac{1}{x^2} + a$ $x = \pm\sqrt{\frac{1}{y - a}}$

Make *x* the subject

25 $y = \frac{x^2 + a}{b}$ $x = \pm\sqrt{by - a}$

26 $a = \sqrt{\frac{x - 3}{c}}$ $x = a^2c + 3$

27 $p = \frac{2x^2}{q} - r$ $x = \pm\sqrt{\frac{q(p + r)}{2}}$

28 $y = 3 - \sqrt{2x}$ $x = \frac{(y - 3)^2}{2}$

29 $k = \frac{(x + 1)^2}{m}$ $x = -1 \pm \sqrt{km}$

30 $t = a\sqrt{x^2 + b}$ $x = \pm\sqrt{\frac{t^2}{a^2} - b}$