

Equations and formulae practice

1. Find the value of these expressions

(a) $3x+1$ when $x = 5$

(d) $5(z+5)$ when $z = -3$

(b) $2y-5$ when $y = 2$

(e) $2(k-7)$ when $k = 3$

(c) $4a+4$ when $a = 10$

(f) $3(p+10)$ when $p = 4$

2. Find the value of each of these expressions:

(a) x^2 when $x = 5$

(i) $7-3g^2$ when $g = -3$

(b) y^3 when $y = 2$

(j) $\frac{12a-4}{a}$ when $a = 4$

(c) a^2 when $a = 10$

(k) $\frac{8a+5}{3a}$ when $a = 2$

(d) z^2 when $z = -3$

(l) $\frac{x+5}{x-5}$ when $x = 10$

(e) $2k^2$ when $k = 3$

(f) $3p^2$ when $p = 4$

(m) $\frac{2y+1}{y-2}$ when $y = 7$

(g) $5d^2+8$ when $d = 9$

(h) $6b^2+3$ when $b = -5$

3. Solve these equations

(a) $2x = 26$

(e) $4(x+2) = 20$

(b) $12x = 30$

(f) $5(x+3) = 30$

(c) $4x + 10 = 20$

(g) $2(x-1) = 11$

(d) $5x - 9 = 41$

(h) $20(x-5) = 102$

4. Last year, twice Albert's age was 28. How old is he now?

5. In five years time, half Joyce's age will be 10. How old is she now?

6. I think of a number, multiply by 4 and add 7. The answer is 35. What was my number?

7. I think of a number, subtract 10 from it, then double it. The answer is 4. What was my number?

Answers

Q1

(a) 16

(d) 10

(b) -1

(e) -8

(c) 44

(f) 42

Q2

(a) 25

(h) 153

(b) 8

(i) -20

(c) 10

(j) 11

(d) 9

(k) 3.5

(e) 18

(l) 3

(f) 48

(m) 3

(g) 413

Q3

(a) $x = 13$

(e) $x = 3$

(b) $x = 2.5$

(f) $x = 3$

(c) $x = 2.5$

(g) $x = 6.5$

(d) $x = 10$

(h) $x = 10.1$

Q4. 15

Q5. 15

Q6. 7

Q7. 12