





*Algebraic Concepts***Answers****3**

3. (a)  $(3x + 40) + 80 + x = 360$ ;  $x = 60^\circ$   
 (b)  $(x + 10) + (x + 30) + (2x + 30) + x = 360$ ;  $x = 58^\circ$   
 (c)  $(x + 10) + (x + 30) + (x - 10) = 360$ ;  $x = 110^\circ$   
 (d)  $(140 - x) + (120 - x) + (180 - x) = 360^\circ$ ;  $x = 26\frac{2}{3}^\circ$
4.  $x + x + (x + 1) + (x + 1) = 10$ ;  $x = 2$  m
5.  $2x + 10 = 42$ ;  $x = 16$
6.  $6x - 8 = 34$ ;  $x = 7$
7. (a)  $\pounds(12 + x)$  (b)  $\pounds(2 + x)$  (c)  $(12 + x) = 3(2 + x)$  (d)  $x = 3$  (e)  $\pounds3$
8. (a)  $(x + 6) \times 2 = 18$ ;  $x = 3$  (b)  $(x \div 2) + 10 = 16$ ;  $x = 12$   
 (c)  $[(x \div 2) + 2] \times 2 = 9$ ;  $x = 5$  (d)  $[(x - 7) \div 2] \times 10 = 115$ ;  $x = 30$
9.  $x + (x + 1) + (x + 2) + (x + 3) = 114$ ;  $x = 27$
10. 6
11. (a)  $y = 2x + 1$  (b)  $x = 4$
12. (a) 7 (b) 4
13.  $x = 2$
14. (a)  $x = 4\frac{1}{2}$  (b)  $y = 4$
15. (a)  $(3x + 1)$  cm (b) (i)  $3x + 1 = 22$  (ii) 7 cm, 5 cm and 10 cm
16. (a)  $2x$  pence (b)  $(x + 20)$  pence (c) 60 pence
17.  $x = 4$