1 Solve each equation.

(a) $4x + 17 = 53$ (1)

(b) $6n - 23 = 31$ (1)

(c) $52 = 7y + 3$ (1)

(d) $100 - 4m = 32$ (1)

(4 marks)

2 Solve each equation. Expand the bracket first.

(a) $3(x + 2) = 15$ (1)

(b) $2(y - 4) = 10$ (1)

(c) $5(n + 1) = 40$ (1)

(d) $4(2m + 3) = 44$ (1)

(6 marks)

3 Write an equation for each situation and solve it.

(a) Mr Wong sold 18 more cakes in May than in June. Altogether he sold 150. How many did he sell in June? (2)

(b) A big tank holds three times as much as a small tank, and 74 litres more. How much does the small tank hold? (2)

(7 marks)

4 A rectangle has a perimeter of 34 cm. Its length is 10 cm.

(a) Write an equation for the width w (2)

(b) Solve your equation to find the width (1)

(c) Check your answer by finding the perimeter of a 10 by 7 rectangle (2)

(5 marks)

5 The sum of three consecutive numbers is 48.

(a) If the smallest is n, write expressions for the other two (1)

(b) Write a simplified equation for the sum (2)

(c) Solve it and write down the three numbers (2)

(5 marks)

6 Look at the equation $x + 5 = x + 9$.

(a) Try $x = 1$. Does the equation work? (1)

(b) Try $x = 100$. Does the equation work? (1)

(c) Explain why no value of x will ever work (2)

(5 marks)

7 **Extension.** Write an equation of your own whose solution is $x = 6$, for each of the following.

(a) An equation that takes one step to solve (2)

(b) An equation that takes two steps to solve (2)

(c) An equation with a bracket in it (2)

(6 marks)