Test - Solving one-step and two-step equations

Year: Year 7 · Duration: 45 minutes · /20

Name:	Date:	**Mark: /20**

Question	1	2	3	4	5	Total
marks	4	4	4	4	4	**20**
Mark						

Show your working.

Question 1 (4 marks)

Question 1 – Solving equations

Solve each equation.

a. $x + 8 = 21$ (1 mark)
b. $\frac{y}{5} = 7$ (1 mark)
c. $3a - 4 = 14$ (1 mark)
d. $\frac{n + 2}{3} = 6$ (1 mark)

Question 2 (4 marks)

Question 2 – Harder equations

Solve each equation.

a. $4(x - 2) = 20$ (2 marks)
b. $5x + 3 = 2x + 18$ (2 marks)

Question 3 (4 marks)

Question 3 – Forming an equation

I think of a number. I multiply it by 5 then subtract 8. The answer is 27.

a. Write an equation for this. (1 mark)
b. Solve your equation to find my number. (2 marks)
c. Check your answer. (1 mark)

Question 4 (4 marks)

Question 4 – Problem: the swimming club

A swimming club charges a joining fee of £15 and £6 for each lesson. Hamza has paid £63 in total.

a. Write an equation for the number of lessons, n. (1 mark)
b. Solve it. (2 marks)
c. Ravi joins a different club with a joining fee of £5 and £7 for each lesson. Which club is cheaper for 8 lessons, and by how much? (1 mark)

Question 5 (4 marks)

Question 5 – Problem: the rectangle

A rectangle has length (3x + 2) cm and width (x + 4) cm. The perimeter is 52 cm.

a. Show that $8x + 12 = 52$. (1 mark)
b. Solve the equation. (1 mark)
c. Work out the area of the rectangle. (2 marks)