FOUNDATION & HIGHER

SAME AT BOTH TIERS

Name ..... Class .....

A17: Linear equations

Solve linear equations, including with the unknown on both sides; use a graph

20 marks · 25 minutes · Non-calculator

1) Solve $5x - 7 = 18$

..... $x =$

[Question 1: 1 marks]

2) Solve $3(2x + 1) = 27$

.....

[Question 2: 2 marks]

3) Solve $7x + 4 = 3x - 10$

.....

[Question 3: 2 marks]

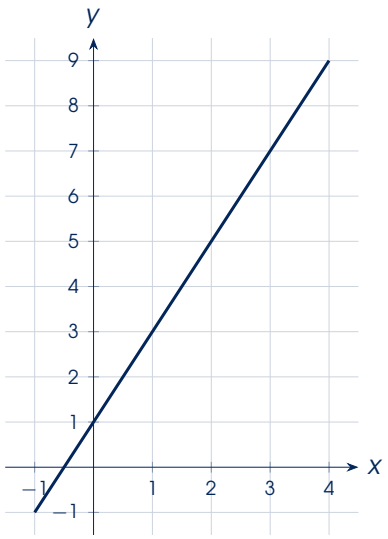
4) Solve $\frac{x+5}{3} = \frac{2x-1}{4}$

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[Question 4: 3 marks]

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5) This is the graph of $y = 2x + 1$



Use the graph to solve $2x + 1 = 6$

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[Question 5: 2 marks]

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6) Solve $4(x - 3) = 2(x + 5)$

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[Question 6: 2 marks]

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7) Solve $\frac{x}{4} + 3 = 7$

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[Question 7: 2 marks]

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8) Solve $5 - 2x = 3x + 20$

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[Question 8: 2 marks]

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9) Solve $\frac{3x - 2}{5} = x - 4$

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[Question 9: 2 marks]

10) Solve $2(3x + 1) - (x - 4) = 21$

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[Question 10: 2 marks]

End of paper – 20 marks in total

Answers and brief mark scheme

Q	Answer	Method / notes
1	5	B1.
2	4	$6x + 3 = 27$ or $2x + 1 = 9$ (M1); A1.
3	-3.5	$4x = -14$ (M1); A1.
4	11.5	$4(x + 5) = 3(2x - 1)$ (M1); $23 = 2x$ (M1); A1.
5	2.5	Line $y = 6$ or reading from the graph (M1); A1.
6	11	$4x - 12 = 2x + 10$ (M1); A1.
7	16	$\frac{x}{4} = 4$ (M1); A1.
8	-3	$-15 = 5x$ (M1); A1.
9	9	$3x - 2 = 5x - 20$ (M1); A1.
10	3	$5x + 6 = 21$ (M1); A1.