

Inequalities

Question	Maximum Mark	Mark Awarded
1	2	
2	8	
3	5	
4	4	
5	6	
6	9	
7	7	
Total Mark		

1.

Solve the inequality $3 - x < 7$.

[2]

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2.

(a) Solve the following equation.

[3]

$$2(30 - x) = 44$$

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(b) Simplify $3(4a - 2c) - 2(2a + 4c)$.

[2]

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(c) Find all integer values of n that satisfy the inequality.

[3]

$$5 \leq 3n < 18$$

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3.

(a) Solve $9x - 4 = 7(x + 2)$.

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[3]

(b) Solve the inequality $10x + 5 > 45$.

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[2]

4.

Anwar went shopping to buy a book and some CDs.

He had exactly £60 with him.

In one shop, he bought a book costing £15 and some CDs.

Each CD cost £7.

When he paid for these items, he was given some change.

Anwar bought n CDs.

Write down an inequality which is satisfied by n .

What is the greatest possible number of CDs Anwar could have bought? [4]

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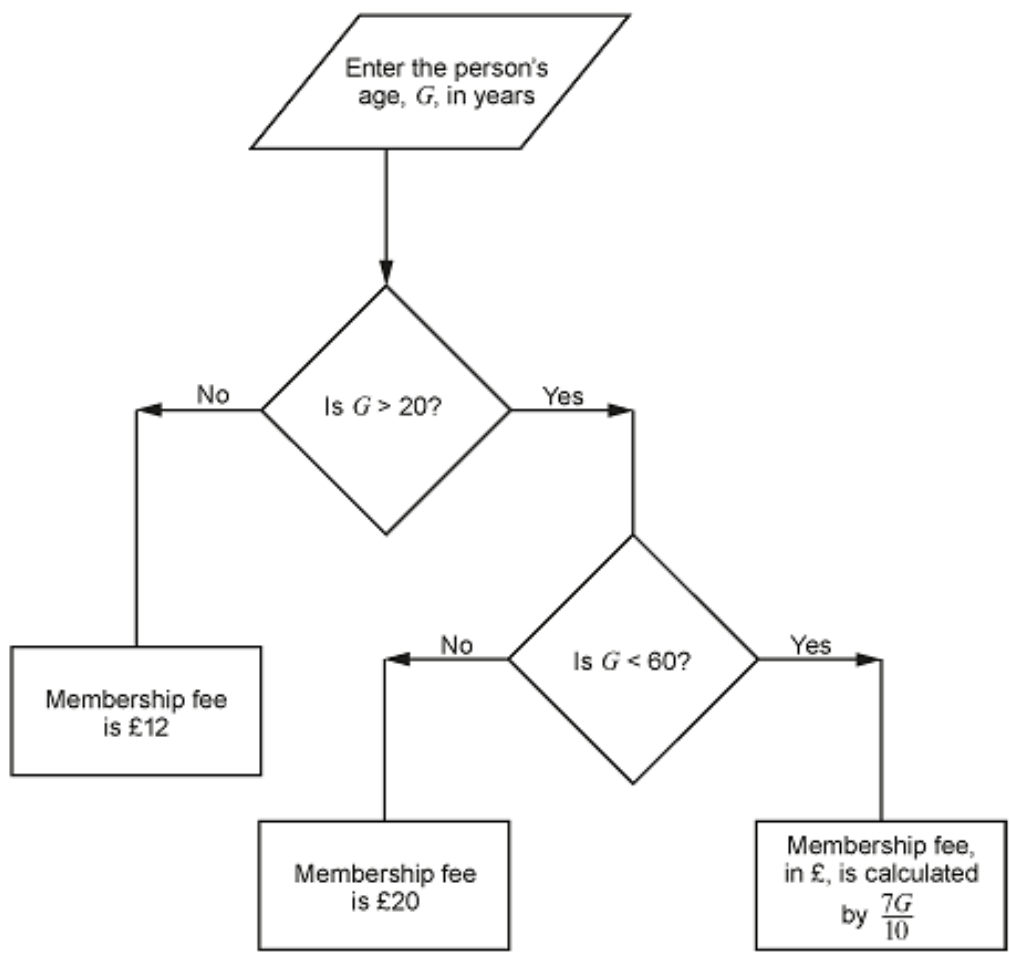
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5.



The following section of a flowchart is used to find the membership fee for a snooker club.



- (a) Use this section of the flowchart to find the membership fee for each of the following people.

Donald, aged 20

[1]

Dawn, aged 16

[1]

Shiona, aged 52

[2]

- (b) Shiona, aged 52, has a younger brother Marc, aged 42.
How much **less** does Marc have to pay to be a member of the snooker club than his sister Shiona? [2]

6.

(a) Solve $5x - 65 = 3x - 17$.

[3]

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(b) Solve $\frac{x}{4} + 12 = 28$.

[2]

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(c) Expand $y(y + 8)$.

[2]

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(d) Solve $10x + 8 < 42$.

[2]

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7.

(a) Huw wrote the following lines of working to solve the equation $3x = 4$.

$$\begin{aligned} 3x &= 4 \\ x &= \frac{3}{4} \\ x &= 0.75 \end{aligned}$$

Huw has made an error.
Explain fully what error was made and give the correct answer.

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(b) Solve $7(5x - 4) = 77$.

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..... [3]

(c) Solve the inequality $6x + 5 < 47$.

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