A18...Solving Inequalities
Listing integers

OCR

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19 (a) Solve $4(x - 5) = 18$

$x =$ .....

(2)

$-3 < t \leqslant 2$
t is an integer.

(b) Write down all the possible values of t.

.....

(2)

Edexcel

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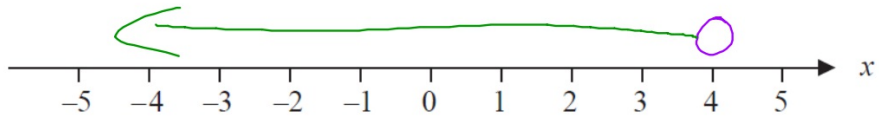
19 (a) On the number line, show the inequality $x < 4$

A17



(2)

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$3 < y \leqslant 7$ where y is an integer.

(b) Write down all the possible values of y.

A18

.....

(2)

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$3 < y \leqslant 7$ where y is an integer. — whole number

(b) Write down all the possible values of y.

A18

$3 < y \leqslant 7$

4, 5, 6, 7 ✓

(2)

19 Solve $22 < \frac{m^2 + 7}{4} < 32$

A18 Show all your working.

(Total for Question 19 is 5 marks)

19 Solve $22 < \frac{m^2 + 7}{4} < 32$

A18

Show all your working.

$\frac{m^2+7}{4} < 32$

$m^2+7 < 128$

$m^2 < 121$

$m < \pm 11$

$m^2 = 121 \quad m = 11 \quad m = -11$

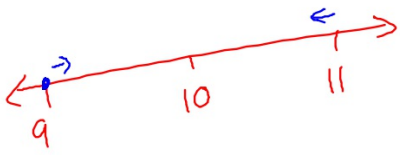
$\frac{m^2+7}{4} > 22$

$m^2+7 > 88$

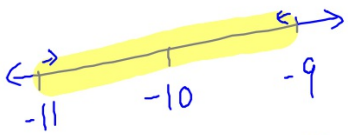
$m^2 > 81$

$m = 9$

$m = -9$



$9 < m < 11$ ✓



$-11 < m < -9$ ✓

(Total for Question 19 is 5 marks)

AQA

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27 How are the whole number solutions to A and B different?

A18

A Solve $3 \leqslant 3x < 18$

B Solve $3 < 3x \leqslant 18$

[2 marks]

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How are the whole number solutions to A and B different?

A18

A Solve $3 \leqslant 3x < 18$

B Solve $3 < 3x \leqslant 18$

[2 marks]

A $3 \leq 3x < 18$

$x = 1, 2, 3, 4, 5$ ✓

B $3 < 3x \leq 18$

$x = 2, 3, 4, 5, 6$ ✓

✓

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18 x is greater than 5 **and** less than or equal to 9

Circle the inequality that shows this.

[1 mark]

A18

$5 \leqslant x < 9$ $5 > x \geqslant 9$ $5 \leqslant x > 9$ $5 < x \leqslant 9$

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18 x is greater than 5 **and** less than or equal to 9

Circle the inequality that shows this.

[1 mark]

A18

$5 \leqslant x < 9$ X

$5 > x \geqslant 9$ X

$5 \leqslant x > 9$ X

$5 < x \leqslant 9$ ⟵ ⟶

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2 Circle the list of **all** the integers that satisfy $-2 < x \leqslant 4$ **[1 mark]**

A18

–2, –1, 0, 1, 2, 3 –1, 0, 1, 2, 3

–2, –1, 0, 1, 2, 3, 4 –1, 0, 1, 2, 3, 4

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2 Circle the list of **all** the integers that satisfy $-2 < x \leqslant 4$

[1 mark]

A18

–2, –1, 0, 1, 2, 3

–1, 0, 1, 2, 3

–2, –1, 0, 1, 2, 3, 4

–1, 0, 1, 2, 3, 4