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(a) Describe fully the single transformation that maps shape A onto shape B.

(2)

(b) On the grid, rotate shape A 180° about $(4, 0)$

(2)

(Total for Question 15 is 4 marks)

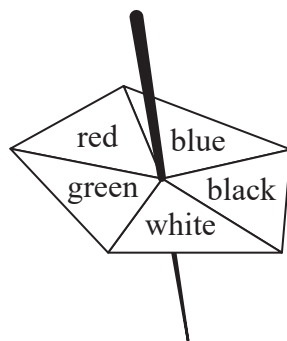


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16 Here is a biased 5-sided spinner.



Jack spins the spinner once.

The table shows information about the probabilities that the spinner lands on red, on blue, on black, on white or on green.

Colour	red	blue	black	white	green
Probability	x	$2x$	$3x$	x	x

(a) Work out the probability that the spinner lands on red.

.....
(3)

Malia spins the spinner 200 times.

(b) Work out an estimate for the number of times the spinner lands on black.

.....
(2)

(Total for Question 16 is 5 marks)



17 (a) Factorise $m^2 + 7m$

.....
(1)

(b) Solve $7(x + 3) = 5x - 4$
Show clear algebraic working.

$x =$
(3)

(c) Expand and simplify $(y + 9)(y - 4)$

.....
(2)

(Total for Question 17 is 6 marks)

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18

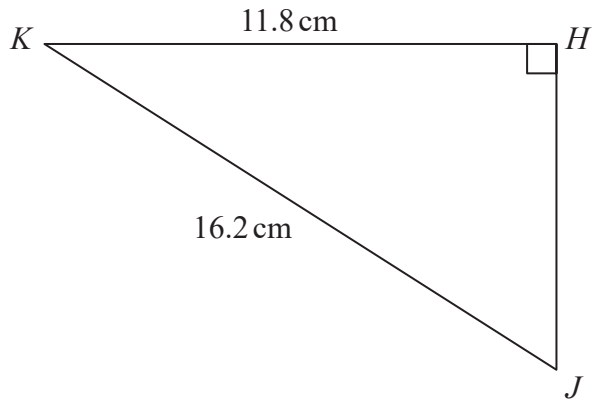


Diagram **NOT** accurately drawn

Calculate the length of HJ .
Give your answer correct to 3 significant figures.

.....cm

(Total for Question 18 is 3 marks)

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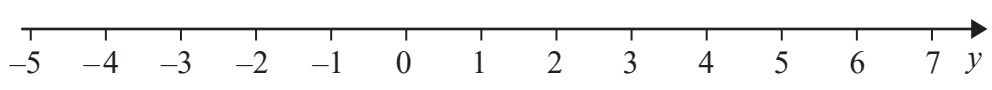
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19 (a) Solve the inequalities $-3 < x + 4 < 9$

(2)

(b) On the number line, represent $-2 < y \leq 5$



(2)

(Total for Question 19 is 4 marks)



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20 The table shows information about the weights of 60 apples.

Weight (w grams)	Frequency
$160 < w \leq 164$	12
$164 < w \leq 168$	20
$168 < w \leq 172$	14
$172 < w \leq 176$	7
$176 < w \leq 180$	4
$180 < w \leq 184$	3

(a) Write down the modal class.

.....grams
(1)

(b) Work out an estimate for the total weight of the 60 apples.

.....grams
(3)

(Total for Question 20 is 4 marks)

TOTAL FOR PAPER IS 100 MARKS

