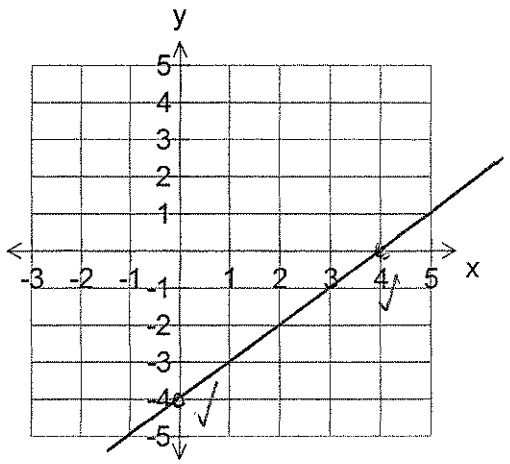
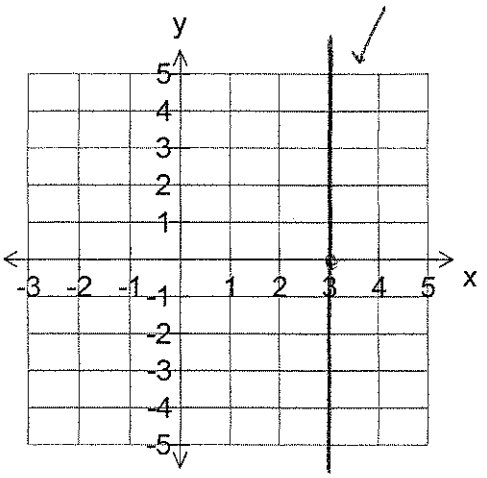
SECTION A
NO CALCULATORS PERMITTED FOR THIS SECTION

TIME 50 minutes
AVAILABLE MARKS 40 marks

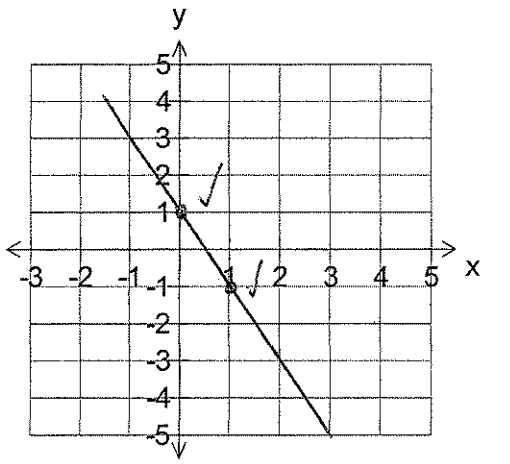
Question 1 [2, 1, 2, 2 = 7 marks]
Sketch the graphs of the following lines:-



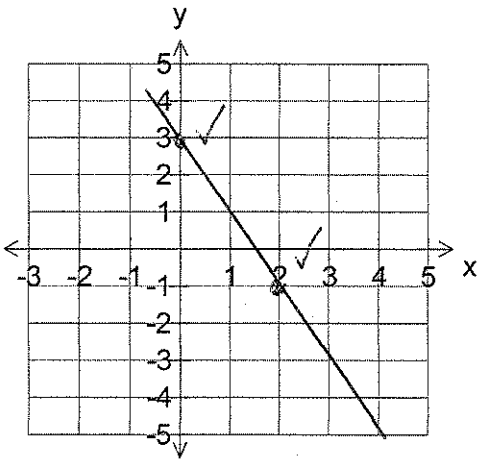
$y = x - 4$



$x = 3$



$y = -2x + 1$



$10x + 5y = 15$

7

Question 2 [2, 2 = 4 marks]
Factorise each of the following:-

(a) $36x + 18y$ = $18(2x + y)$ ✓✓

(b) $16a^2 - 24ab$ = $8a(2a - 3b)$ ✓✓

4

Question 3 [2, 3 = 5 marks]

Solve the following equations:-

(a) $5x + 4 = 19$

$5x = 19 - 4$

$5x = 15$ ✓

$x = 3$ ✓

(b) $3(x - 4) - 3x = 9 - 3(4 - x)$

$3x - 12 - 3x = 9 - 12 + 3x$ ✓

$-12 = -3 + 3x$

$-9 = 3x$

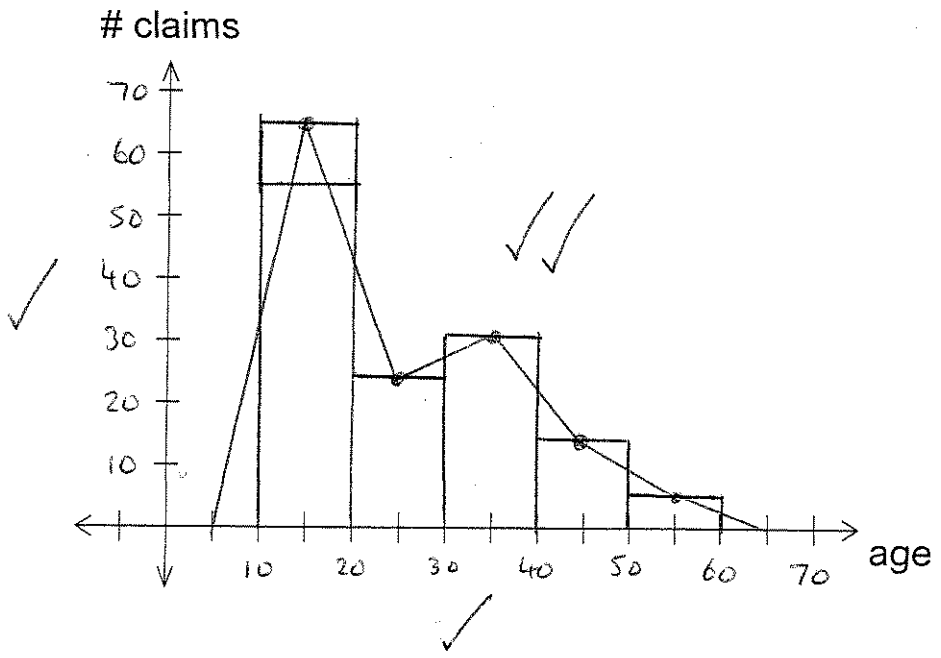
$x = -3$ ✓✓

5

Question 4 [4, 2 = 6 marks]

Age of driver	10≤x<20	20≤x<30	30≤x<40	40≤x<50	50≤x<60
Number of claims	65	25	31	15	5

(a) On the axes below, draw a histogram of the data given in the table above.



✓ ✓✓ ✓

6

(b) On the histogram, sketch the frequency polygon

✓✓

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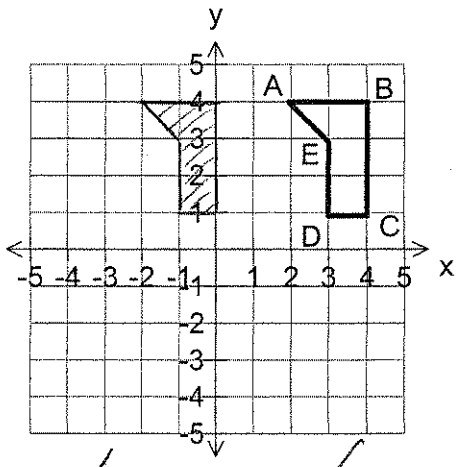
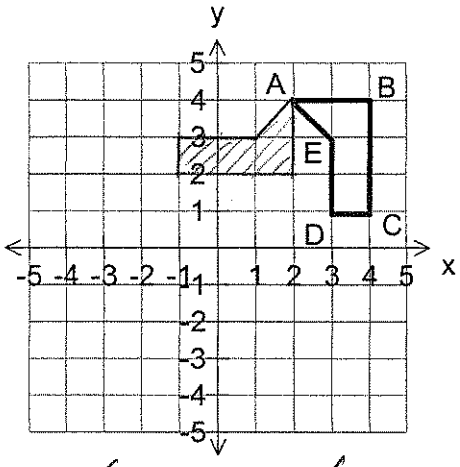
Question 5 [2, 2, 2, 2 = 8 marks]

Show the following transformations on the axes below:-

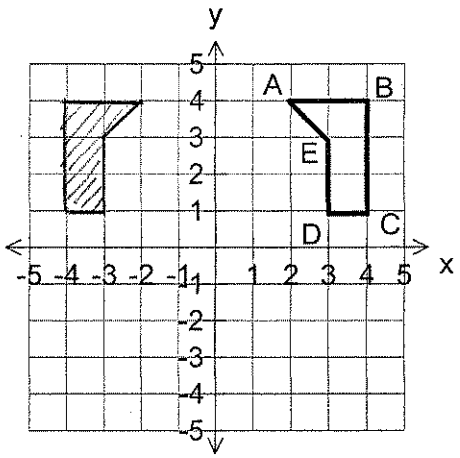


Translate Δ A-E 4 units to the left ✓ ✓

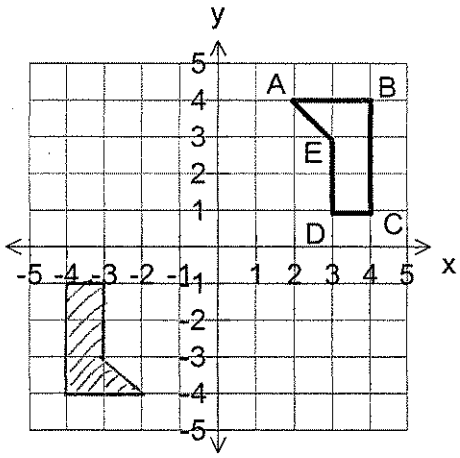


Δ A-E 90° clockwise about A ✓ ✓

Rotate



Reflect Δ A-E in the Y axis ✓ ✓



Rotate Δ A-E 180° clockwise about the origin ,point (0, 0) ✓ ✓

Question 6 [4 marks]

Rebecca's father is 5 years older than three times her age. If their combined age is 46 years, find the age of both Rebecca and her father.

[To gain full marks, working out must be shown].

$D = 3R + 5$ — ① ✓

$D + R = 46$ — ②

Subst ① into ②

$3R + 5 + R = 46$ ✓

$4R = 41$

$R = 10\frac{1}{4}$ years ✓

or 10·25 years

$D = 46 - 10\frac{1}{4}$

$D = 35\frac{3}{4}$ years ✓

$D = 35.75$ years.

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Question 7 [1, 1, 1, 1, 1, 1 = 6 marks]

Scores on a test out of 10 were as follows for a class of students:-

Score	5	6	7	8	9	10
Frequency	2	5	10	8	4	3

Answer the following questions for the above set of scores:-

(a) How many students are in the class? 32 ✓

(b) What is the mode? 7 ✓

(c) What is the median? 7 ✓

(d) What is the mean? 7·5 ✓

(e) How many scores were **more** than 7? 15 ✓

(f) What was the score of the 26th student from the bottom 9 ✓

END OF SECTION A
GO BACK AND CHECK YOUR WORKING