

- 8 Solve algebraically.

$$3x + 2y = 4$$

$$2x - 5y = -29$$



$$x = \dots\dots\dots$$

$$y = \dots\dots\dots [4]$$

4

- 9 The table shows the median and quartiles of the marks scored by boys and girls in the same examination.

	Median	Lower quartile	Upper quartile
Boys	50	36	63
Girls	47	28	70

Make two comparisons between the performance of boys and girls in the examination.

1.

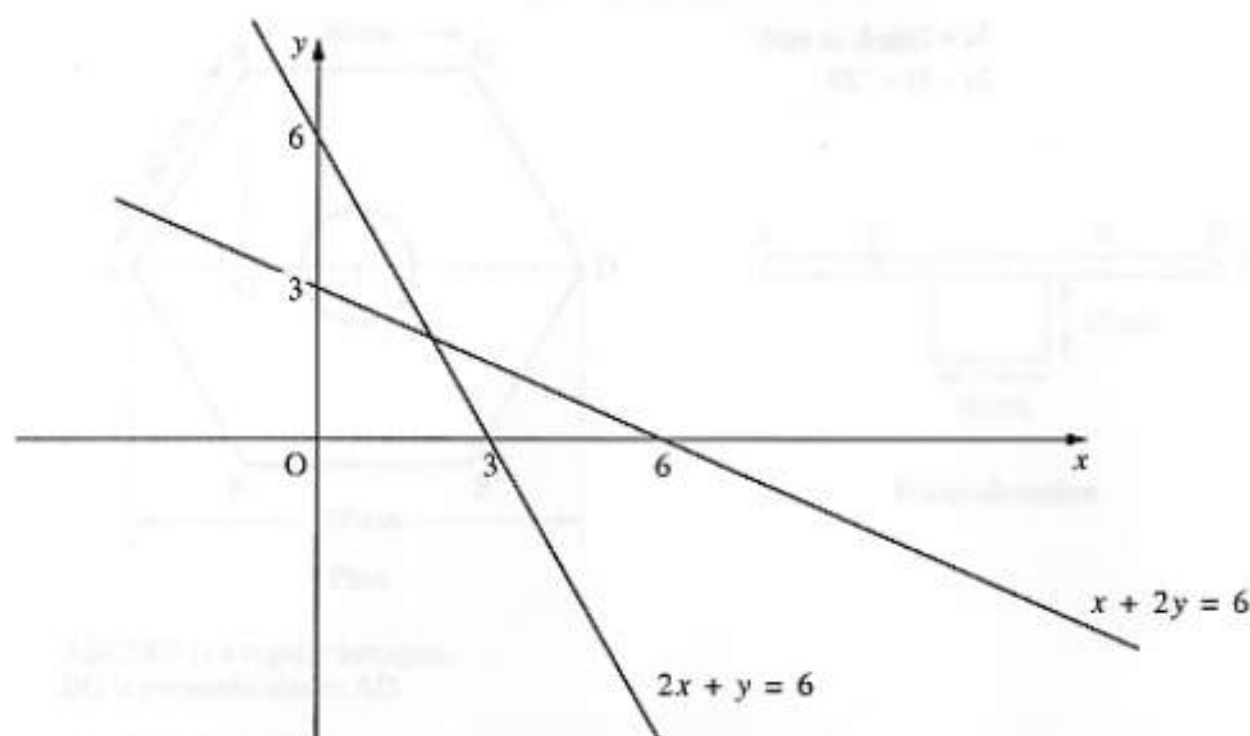
[1]

2.

[1]

2

- 10 The diagram shows the graphs of $2x + y = 6$ and $x + 2y = 6$.



On the diagram show by shading the region for which

$$\begin{aligned} 2x + y &\leq 6, \\ x + 2y &\geq 6 \text{ and} \\ x &\geq 0. \end{aligned}$$

Label your region R.

[3]

3

- 11 (a) Sarah starts a new job.
Her starting salary is £12 000.
This will increase by 10% at the end of her first year.
Her salary will increase by a further 15% at the end of her second year.

What is the overall percentage increase in her salary after two years?

(a)% [2]

- (b) An electrical store holds a sale.

The prices of all goods are reduced by 12% for each week of the sale for which they remain unsold.

After how many weeks will the price of unsold goods be less than half price?



(b)..... [2]

4

- 12 The distance of the Earth from the Sun is 149 500 000 000 metres.

- (a) Write 149 500 000 000 in standard form.

(a)..... [1]

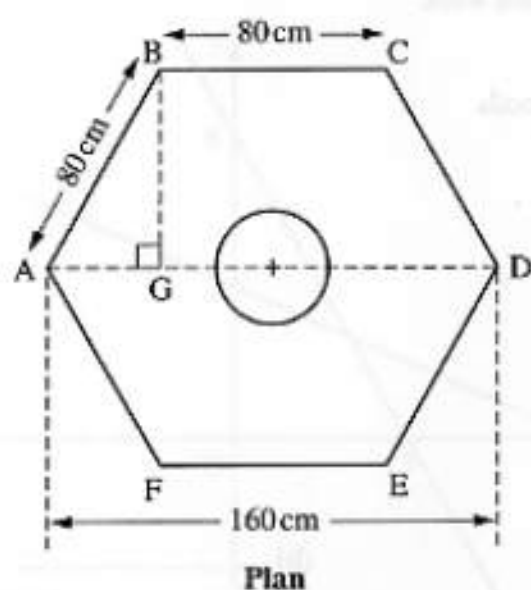
- (b) The speed of light is 2.998×10^8 m/s.

Calculate the time taken for light from the Sun to reach the Earth.

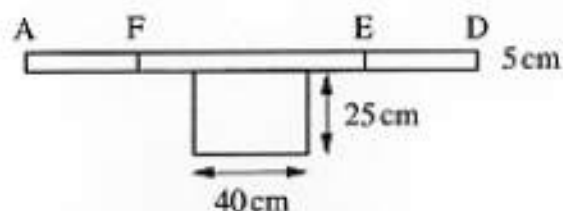
(b).....seconds [2]

3

- 13 The sketches show the plan and front elevation of a water feature.



Not to scale



ABCDEF is a regular hexagon.
BG is perpendicular to AD.

- (a) Show that BG is 69 cm correct to the nearest centimetre.

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..... [3]

- (b) The deeper part of the feature is a cylinder of depth 25 cm.
The whole feature is filled with water.

Calculate the volume of the water in the feature.
Give your answer to the nearest litre.

(b) litres [6]

9
