

“Mind Your Maths” **Answers 2**

Year 10 Exam Revision

Answer 1

(a) It's option (i), a pentagram.

[1 mark]

(b) (i) $x = 108^\circ$

(ii) $y = 72^\circ$

(iii) $z = 36^\circ$

[3 marks]

Answer 2

Each part is worth $\frac{108}{9} = \text{£}12 \Rightarrow \text{£}48 : \text{£}36 : \text{£}24$

Amy gets £48

Bob gets £36

Charles gets £24

[2 marks]

Answer 3

(i) $x^2 + 18x + 77$

(ii) $x^2 - 12x - 45$

(iii) $x^2 - 16x + 64$

(iv) $12x^2 + 7x - 45$

[2, 2, 2, 3 marks]

Answer 4

June receives £45.50

[2 marks]

Answer 5

(i) $(x + 11)(x - 7)$

(ii) $(x - 4)(x - 1)$

[4 marks]

Answer 6

(i) $x^2 + 10x + 16 = 0$

(ii) $x^2 - 8x - 33 = 0$

$(x + 8)(x + 2) = 0$

$(x - 11)(x + 3) = 0$

Either $x + 8 = 0$ or $x + 2 = 0$

Either $x - 11 = 0$ or $x + 3 = 0$

$x = -8, x = -2$

$x = 11, x = -3$

Answer 7

(i) $V = 2W^2$

(ii) $V = 2 \times 30^2 \therefore V = \text{£}1800$

(iii) 50 grams

[6 marks]

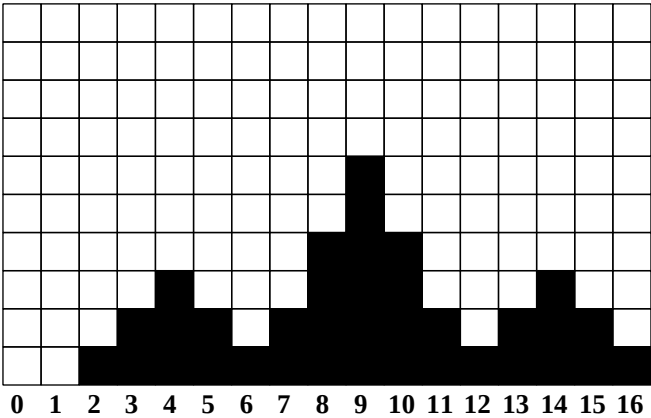
Answer 8

(a)

		•	•	•	•	•
•	2	3	4	7	8	9
•	3	4	5	8	9	10
•	4	5	6	9	10	11
•	7	8	9	12	13	14
•	8	9	10	13	14	15
•	9	10	11	14	15	16

[2 marks]

(b)

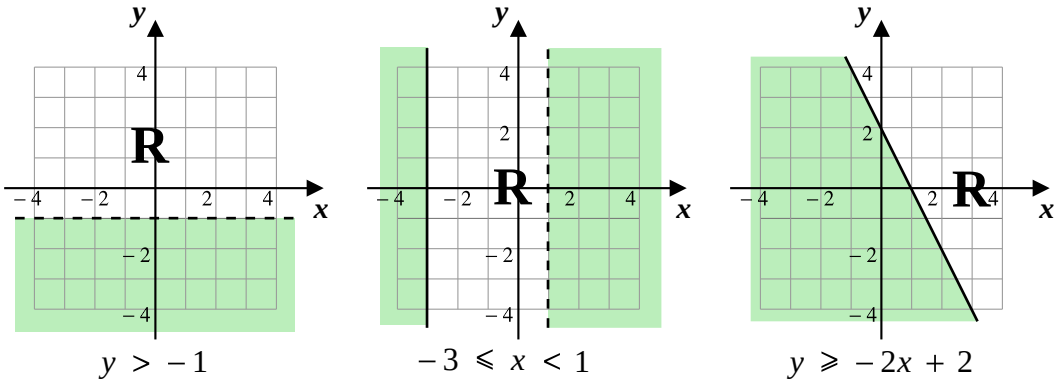


[1 marks]

- (c) (i) 9
 (ii) 2, 6, 12, 16
 (iii) 0.5

[3 marks]

Answer 9



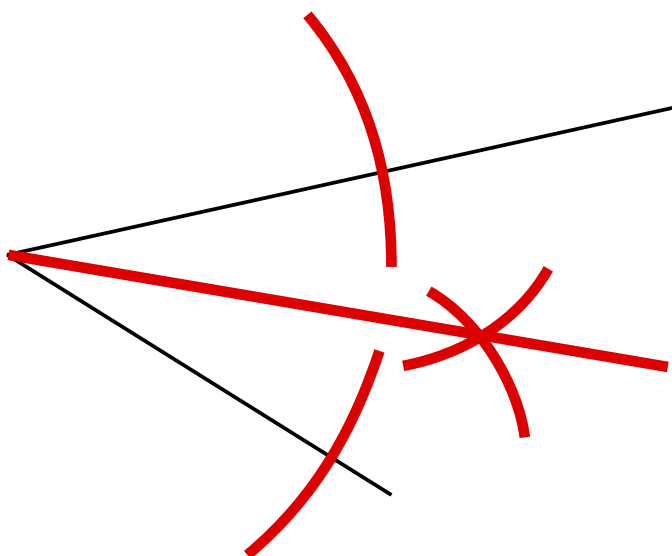
[6 marks]

Answer 10

(i) Cut in half, divide in two equal parts.

[1 mark]

(ii) Construction lines that evidence correct method used.



[3 marks]

Answer 11

$$\begin{aligned}
 & 7(3x + y) - 5(x - 2y) \\
 &= 21x + 7y - 5x + 10y \\
 &= 16x + 17y
 \end{aligned}$$

[2 marks]

Answer 12

At some stage the data needs putting in order...

6	6	6	7	8	8
9	11	13	14	19	

(i) mode = 6 seconds

(ii) median = 8 seconds

(iii) $13 - 6 = 7$ seconds

(iv) mean = 9.7 seconds

[1, 2, 2, 2 marks]

Answer 13

(i) 10 : 6 (or 5 : 3) Δ N°s 1, 3, 6, 10, 15, 21, 28, 36, 45, 55, 66, 78

(ii) 21 : 15 (or 7 : 5)

(iii) 36 : 28 (or 9 : 7)

55 : 45 (or 11 : 9)

78 : 66 (or 13 : 11)

[1, 1, 2 marks]