Revision F3 (All topics) C [43] MARKSCHEME

1.

(a) 2×14 or 4×7 M1

*Or 2 and 7 or 2, 2 and 7 **only** <u>or</u> on answer line*

$2 \times 2 \times 7$ A1

Or $2^2 \times 7$

(b) 28,56,84, ... <u>and</u> 42, 84, ... M1

Or $2 \times 2 \times 3 \times 7$ or $22 \times 3 \times 7$

84 Al

SC1 for any multiple of 84

[4]

2.

(a)		$13y - 1$	M1 A1	for expansion of one bracket for full simplification
(b)		$35u^3w^7$	B1 B1	for 2 of 35, u^3 and w^7 correct cao

3.

(a) $\sqrt{18}$ M1,A1cao

M1 for $AB^2 = 3^2 + 3^2$

A1 for answer

(b) y = x+2 M1,A1,A1ft

M1 for Attempt to find gradient

A1 for Gradient = $\frac{3}{3} = 1$

Ft their gradient but must be + 2.

[5]

4.

$5x - 3x > 11 + 2$ or $2x > 13$	M1	
$x > 6.5$	A1	oe SC1 6.5

5.

(a) (i) $4 + 1 = 5$, $40 \div 5$ (=8) M1

8 A1

(ii) 24 B1

(b) Percentage = $\frac{24}{40} \times 100$ M1

= 60 A1

[5]

6.

(a) $\frac{1}{2} \times \pi \times 1.4^2$ M1

3.077 to 3.1 A1

6.15 to 6.16 SC1 $0.5\pi 1.4^2$ = 3 gets 2 marks

m^2 B1

(b) Their (a) × 0.5 M1

× 50 after attempt to convert to cm^2 eg 300 × 50

1.5(...) Alft

[5]

7.

604.8 kg	**4** 1 AO1.1 1 AO1.3b 1 AO3.1d 1 AO3.2	**B3** for answer 10.08 [kg] OR **M1** for 400 × 400 × 28 **soi** **M1** for *their* volume ÷ 1000^3 **soi** **M1** for 2250 × *their* volume [× 60] **soi**	Volume calculation using consistent units Conversion of mm to m for all 3 dimensions done at any stage Calculation of mass of 1 or 60 slabs

8.

$\sin(x) = \frac{20}{230}$ M1

0.0869(56…) A1

or 0.0870

4.99 or 5 or 4.9885… A1

NB watch out for tangent

Ans 5 from scale drawing scores 3

0.08706… or 5.542 as final answer scores M1A1A0

[3]

9.

(a) 3 B1

(b) Plot points B1ft

Draw curve B1

(c) 1.1 – 1.4 B1

[4]

10.

(a) Midpoints correct (see below) B1

Σfx attempted and ÷ 50 M1

27.7 A1

(b) (5+9+10)/3 M1

= 8 A1

(9+10+9) 13 = 9.3... A1

Speed (mph)	Frequency	Midpoint	fx
20 to less than 25	12	22.5	270
25 to less than 30	27	27.5	742.5
30 to less than 35	8	32.5	260
35 to less than 40	3	37.5	112.5
	Σf=50		Σfx = 1385

[6]