

CAMBRIDGE INTERNATIONAL EXAMINATIONS**Cambridge International General Certificate of Secondary Education****MARK SCHEME for the May/June 2015 series****0607 CAMBRIDGE INTERNATIONAL MATHEMATICS****0607/32****Paper 3 – Core, maximum raw mark 96**

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Abbreviations

cao	correct answer only
dep	dependent
FT	follow through after error
isw	ignore subsequent working
oe	or equivalent
SC	Special Case
nfw	not from wrong working
soi	seen or implied

1	(a) (i)	32 650	1	
	(ii)	32 700	1	
	(b)	62.6	1	
	(c)	530.8416	1	
	(d)	6	1	
	(e)	9	1	
	(f)	24	1	
	(g)	208 : 234	2	M1 for dividing by 17 soi
	(h)	1.6[0]	2	B1 for 8.4[0]
2	(a)	$\frac{75}{100}$ oe isw	1	
	(b)	66.67	2	B1 for correct answer to ≥ 2 sf
	(c)	$\frac{12}{25}$	2	B1 if correct fraction not in lowest terms
	(d)	5.76	1	
	(e)	76.8[0]	2	M1 for 0.8×96 oe
	(f)	120	2	M1 for $\frac{800 \times 5 \times 3}{100}$ oe

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3	(a)	$\frac{5}{10}$ oe	1	
	(b)	$\frac{4}{10}$ oe	1	
	(c)	$\frac{0}{10}$	1	
	(d)	$\frac{2}{10}$ oe	1	
4	(a)	40	1	
	(b)	blue	1	
	(c) (i)	brown = 9 green = 36 black = 72	2	B1 for 1 correct angle
	(ii)	3 sectors correct	2	B1 for 1 sector correct
5	(a)	6	1	
	(b)	24	1	
	(c)	1	1	
	(d)	12	1	
6	(a)	600	2	B1 for 100
	(b)	314 or 314.1 to 314.2	2	M1 for $4 \times \pi \times 5^2$ oe
	(c)	1520 or 1523 to 1524	4	M3 for $10^3 + \frac{4}{3} \times \pi \times 5^3$ oe or M2 for $\frac{4}{3} \times \pi \times 5^3$ or M1 for 10^3
	(d)	60.9 or 60.8 to 60.96	2 FT	If 0 scored SC1 FT for 6090 or 6080 to 6096

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7	(a)	135	1	
	(b)	71.6 or 71.56 to 71.57	2	M1 for $\tan[C] = \frac{36}{12}$
	(c)	37.9 or 37.94 to 37.95	2	M1 for $\sqrt{36^2 + 12^2}$ or better
	(d)	25.5 or 25.45 to 25.46	3	M2 for $CF = \frac{18}{\sin 45}$ or $\frac{18}{\cos 45}$ or M1 for $\sin 45 = \frac{18}{CF}$ or $\cos 45 = \frac{18}{CF}$ If 0 scored SC2 for correct answer from Pythagoras
	(e) (i)	[triangle CFG is] isosceles [$CG = 18$]	1	M1 for $31 - 18$ oe
		$31 - 18 = 13$	1	Dep on isosceles
	(ii)	173 or 173.3 to 173.5	1 FT	FT 110 + <i>their (c)</i> + <i>their (d)</i>
	(f)	612	3	M2 for $0.5 \times 12 \times 36 + 0.5 \times 18 \times 18 + 13 \times 18$ or better or M1 for $0.5 \times 12 \times 36$ or $0.5 \times 18 \times 18$ or 13×18 or better
8	(a)	Points plotted correctly	2	B1 for 4 points correct
	(b)	positive	1	
	(c) (i)	6.75	1	
	(ii)	5	1	
	(iii)	Point plotted correctly	1 FT	
	(d)	Ruled line through mean within tolerance	2	B1 any line through mean point
	(e)	5 or 6	1 FT	FT line with positive gradient
9	(a)		2	M1 for correct shape A1 for maximum in second quadrant and x intercepts approximately correct
	(b)	6	1	

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10	(c)	-2.47 or -2.475 to -2.474 0.808 or $0.8081\dots$	1 1	B1 for positive gradient B1 for correct y -intercept at approximately 4
	(d)	$(-0.833, 8.08)$ or $(-0.833\dots, 8.083\dots)$	1	
	(e)		2	
	(f)	$(-2.59, -1.18)$ or $(-2.591$ to $-2.590, -1.181\dots)$ $(0.257, 4.51)$ or $(0.2573\dots, 4.514$ to $4.515)$	1 1	
	(a) (i)	-2	2	
	(ii)	$x < 3$	2	
	(b) (i)	s^7	1	
	(ii)	t^8	1	
	(iii)	$6r^2$	2	
	(c)	$10x - 9$ final answer	2	
	(d)	$3y(5 - y)$ final answer	2	
11	(a)	18	3	M2 for $\frac{15}{50} \times 60$ oe or M1 for $\frac{15}{\text{their time}}$ or $\frac{50}{60}$
	(b)	75	3	M2 for $\frac{15}{12} \times 60$ or M1 for $\frac{15}{12}$ or $\frac{12}{60}$ or 5 min/km