01. 0607_m23_ms_22 Q: 16

Question	Answer	Marks	Partial Marks
	[r=] 2	**3**	**M2** for $r^3 = \frac{32}{4}$ or better or **M1** for $\frac{1}{2}\times\frac{4}{3}\times\pi\times r^3 = \frac{16}{3}\times\pi$ oe

02. 0607_s23_ms_23 Q: 5

Question	Answer	Marks	Partial Marks
	0.012 cao	**1**	

03. 0607_m22_ms_22 Q: 7

Question	Answer	Marks	Partial Marks
	18	**2**	**M1** for $\left[\frac{1}{2}\right]\times\frac{4}{3}\times\pi\times 3^3$

04. 0607_m22_ms_22 Q: 10

Question	Answer	Marks	Partial Marks
(a)	$3\frac{3}{4}$ oe	**2**	**M1** for $\frac{8}{5}=\frac{6}{PR}$ oe
(b)	3600	**3**	**M2** for [1600×] $\left(\sqrt[3]{\frac{27}{8}}\right)^2$ oe or **M1** for $\left(\sqrt[3]{\frac{27}{8}}\right)$ or $\left(\sqrt[3]{\frac{8}{27}}\right)$ or $\left(\frac{27}{8}\right)^2$ or $\left(\frac{8}{27}\right)^2$ oe

05. 0607_s22_ms_22 Q: 4

Question	Answer	Marks	Partial Marks
	0.0006	**1**	

06. 0607_w22_ms_23 Q: 6

Question	Answer	Marks	Partial Marks
	$2\frac{1}{2}$ oe	3	**M2** for $r^3 = \frac{125}{12} \times \frac{3}{2}$ or better or **M1** for $\frac{1}{2} \times \frac{4}{3}\pi r^3$ and $\frac{1}{3}\pi \times 5^2 \times \frac{5}{4}$

07. 0607_w22_ms_23 Q: 8

Question	Answer	Marks	Partial Marks
(a)	similar	1	
(b)	54	2	**M1** for $\left(\frac{18}{12}\right)^2$ oe or $\left(\frac{12}{18}\right)^2$ oe

08. 0607_s21_ms_21 Q: 3

Question	Answer	Marks	Partial Marks
(a)	15	1	
(b)	54	2	**M1** for *their* $15 \times 60 \times 60 \div 1000$ oe or $\frac{3 \times 300 \times 60}{1000}$

09. 0607_s21_ms_22 Q: 12

Question	Answer	Marks	Partial Marks
	50	3	**M2** for $\frac{x}{360} \times \pi \times 6^2 = 5\pi$ oe or **M1** for $\frac{x}{360}$

10. 0607_s21_ms_23 Q: 9

Question	Answer	Marks	Partial Marks
	36	2	**M1** for $(9 + 1) \times 60 \times 60 \div 1000$ oe If 0 scored, **SC1** for answer 32.4

11. 0607_s21_ms_23 Q: 13

Question	Answer	Marks	Partial Marks
(a)	4.8	2	**M1** for $\frac{10}{6}=\frac{8}{PR}$ oe
(b)	108	2	**M1** for $\left(\frac{6}{10}\right)^3$ or $\left(\frac{10}{6}\right)^3$ oe seen

12. 0607_w21_ms_21 Q: 10

Question	Answer	Marks	Partial Marks
	[a =] 3 [b =] 9	3	**M1** for $\frac{30}{360}\times\pi\times6^2$ oe **M1** for $\frac{1}{2}\times6\times6\times\sin30$ oe

13. 0607_w21_ms_22 Q: 9

Question	Answer	Marks	Partial Marks
	$\frac{2}{9}$ cao	2	**M1** for $\frac{40}{360}[\times2\pi r]$ oe

14. 0607_s20_ms_21 Q: 1

Question	Answer	Marks	Partial Marks
	12	2	**M1** for 10^2 oe seen

15. 0607_s20_ms_21 Q: 5

Question	Answer	Marks	Partial Marks
	24π	2	**M1** for $\frac{1}{3}\times\pi\times3^2\times8$

16. 0607_w20_ms_22 Q: 6

Question	Answer	Marks	Partial Marks
	$25\pi-48$ final answer	4	**B2** for [r] = 5 or **M1** for 8^2+6^2 **M1** for $\pi\times$ (*their* 5)$^2-8\times6$

17. 0607_w20_ms_23 Q: 6

Question	Answer	Marks	Partial Marks
	8π	**2**	**M1** for $\frac{45}{360}\times\pi\times8^2$

18. 0607_s19_ms_21 Q: 5

Question	Answer	Marks	Partial Marks
(a)	4 [h] 15 [min]	**2**	**M1** for 425 ÷ 100 soi by 4.25 oe
(b)	[0]1 51 oe	**2**	**B1** for 25 51

19. 0607_s19_ms_21 Q: 12

Question	Answer	Marks	Partial Marks
	$2\sqrt{6}$	**3**	**M1** for $\frac{60}{360}\times\pi\times12^2=\pi r^2$ oe **A1** for $r^2=24$ or better

20. 0607_s19_ms_22 Q: 7

Question	Answer	Marks	Partial Marks
	102	**2**	**M1** for $\frac{85}{50}[\times60]$ oe

21. 0607_w19_ms_21 Q: 7

Question	Answer	Marks	Partial Marks
	39	**3**	**B1** for $\frac{1}{2}\times\frac{4}{3}\times\pi\times3^3$ **B1** for $\frac{1}{3}\times\pi\times3^2\times7$

22. 0607_w19_ms_22 Q: 2

Question	Answer	Marks	Partial Marks
	3200	**1**	

23. 0607_s18_ms_21 Q: 15

Question	Answer	Marks	Partial Marks
	$\frac{64}{12}$ oe	3	**M1** for $\frac{x}{360}\times\pi\times16=\frac{4\pi}{3}$ oe **M1** for $\frac{y}{360}\times\pi\times8^2=k\pi$ oe OR **M1** for $\frac{\frac{4\pi}{3}}{16\pi}$ oe **M1** for $\frac{k\pi}{8^2\pi}$ or $\frac{x}{360}\times\pi\times8^2=k\pi$ oe

24. 0607_w18_ms_21 Q: 18

Question	Answer	Marks	Partial Marks
	$4\pi r^2=\pi r\times\sqrt{h^2+r^2}$	M2	**M1** for $l^2=h^2+r^2$ or $4\pi r^2=\pi rl$
	$16r^2=h^2+r^2$ leading to	A1	**Dep** on **M2** scored
	$h=r\sqrt{15}$	A1	

25. 0607_w18_ms_23 Q: 4

Question	Answer	Marks	Partial Marks
(a)	40	1	
(b)	144	2	**FT** *their* **(a)** **M1** for *their* $40\times\frac{60\times60}{1000}$ oe or $\frac{120}{1000\times3}\times60\times60$ oe

26. 0607_w18_ms_23 Q: 10

Question	Answer	Marks	Partial Marks
	3	2	**M1** for $\frac{4}{3}\times\pi\times r^3=36\pi$ oe

27. 0607_w18_ms_23 Q: 14

Question	Answer	Marks	Partial Marks
	10	**3**	**M2** for $\left(\frac{5}{h}\right)^3 = \frac{8}{64}$ oe or **M1** for (scale factor)$^3 = \frac{8}{64}$ or $\frac{64}{8}$ or better

28. 0607_s17_ms_21 Q: 4

Question	Answer	Marks	Part Marks
	[0].043[0]	**1**	

29. 0607_s17_ms_22 Q: 6

Question	Answer	Marks	Partial Marks
	$27 + 9\pi$ or $9(3 + \pi)$ or $3(9 + 3\pi)$	**3**	**M1** for $\frac{1}{2} \times 9 \times 6$ oe **M1** for $\frac{1}{4} \times \pi \times 6^2$ oe

30. 0607_w17_ms_22 Q: 2

Question	Answer	Marks	Partial Marks
	54	**2**	**B1** for [side =] 3 or better

31. 0607_w17_ms_22 Q: 7

Question	Answer	Marks	Partial Marks
(a)	72	**2**	**M1** for × 60 × 60 ÷ 1000
(b)	54	**2**	**FT** *their* (a) × 0.75 **M1** for × 45 ÷ 60 oe

32. 0607_w17_ms_23 Q: 12

Question	Answer	Marks	Partial Marks
	2	**2**	**M1** for $\frac{4}{3}\pi r^3 = \frac{32}{3}\pi$ oe