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|----|----------------------------------|-----|--|
| 1. | (a) 440 (b) 3 min 20 sec | 2 | M1 $\sin 37.1$ or $\cos 52.9 = \frac{h}{730}$ oe |
| | | 2 | M1 $\frac{730}{3.65}$ |
| 2. | 16.8 | 3 | M2 $\tan 17 = \frac{h}{55}$ or $\tan 73 = \frac{55}{h}$ or M1 $\tan 17 = \frac{55}{h}$ or $\tan 73 = \frac{h}{55}$ if angle seen in wrong place at <i>P</i> |
| 3. | 23.6 | 2 | M1 $\sin R = 20/50$ or $\frac{20}{\sin R} = \frac{50}{\sin 90}$ |
| 4. | (a) 14.1 (b) 3.74 or 3.78 | 2 | M1 $(BD)^2 = 10^2 + 10^2$ or $\sin 45 = 10/CD$ |
| | | 3 | M1 (a)/2 M1 (their (a))/2 ² + PM ² = 8 ² |
| 5. | 53.1 | 2 | B1 <i>C</i> = 36.9 seen, must have <i>C</i> stated or marked on the diagram or M1 $\sin A = \frac{4}{5}$ or $\tan A = \frac{4}{3}$ but must have <i>A</i> stated |
| 6. | 96 www | 5 | M1 $3^2 + 4^2$ A1 5 M1 $\frac{1}{2} \times 6 \times \text{"5"}$ (= 15) M1 $4 \times \text{their triangle area} + 6^2$ |
| 7. | (a) 3.61 | 3 | M1 $(3 - 1)^2 + (0 - 3)^2$ oe M1 $\sqrt{2^2 + 3^2}$ |
| 8. | (a) 84(.00..) (b) 136 | 4 | M2 for $\cos(\dots) = \frac{2.7^2 + 4.5^2 - 5^2}{2 \times 2.7 \times 4.5}$ or (M1 for $5^2 = 2.7^2 + 4.5^2 - 2 \times 2.7 \times 4.5 \times \cos C$) A1 for 0.1045... (implied by correct answer) |
| | | 1ft | 220 – their (a) |
| 9. | 10(.0) 210 | 2 | M1 $\frac{1}{2} \times 8 \times 5 \times \sin 150$ |
| | | 2 | M1 30° correctly placed at <i>B</i> or <i>C</i> oe |