

# Topic Test Mark Scheme

## Geometry and Measure recap and review - Higher

| Q | Answer  | Mark  | Comments |
|---|---|-------|----------|
| 1 | (3, 0)  | B1    |          |
| 2 | (1, 3)  | B1    |          |
| 3 | (2, 1)  | B1    |          |
| 4 | Enlargement   | B1    |          |
|   | (SF) $\frac{1}{2}$  | B1    |          |
|   | Centre (1, 1)   | B1    |          |
| 5 | $\frac{x}{360} \times \pi \times 2 \times 4$                | M1    | oe       |
|   | $(\frac{x}{360} \times \pi \times 2 \times 4) + 4 + 4 = 12$ | M1dep | oe       |
|   | [57.2, 57.3]  | A1    |          |

| Q | Answer   | Mark  | Comments |
|---|--|-------|----------|
| 6 | $\frac{1}{2} \times \frac{4}{3} \times \pi \times r^3$               | M1    | oe       |
|   | $(3r)^2 - r^2$ or $8r^2$   | M1    | oe       |
|   | $\sqrt{8r^2}$ or $\sqrt{8}r$   | M1dep | oe       |
|   | $\frac{1}{3} \times \pi \times r^2 \times \text{their } \sqrt{8r^2}$ | M1dep | oe       |
|   | $\frac{2\sqrt{2}}{3} \pi r^3 + \frac{2}{3} \pi r^3$                  | A1    |          |
| 7 | $\pi \times 20 \times 15$ or $300\pi$ or 942.47..                    | M1    |          |
|   | their 9.4247.. $\times 3.60$ or 33.93                                | M1dep |          |
|   | $1000 \div 33.93$ or 29.47..   | M1dep |          |
|   | 29   | A1    |          |
| 8 | $(\cos A =) \frac{5^2 + 6^2 - 7^2}{2 \times 5 \times 6}$             | M1    |          |
|   | $\frac{-8}{60}$ or answer negative so obtuse                         | A1    |          |