National 5 Volume Progress Check Solutions.

1) Volume $= \pi r^2 h$

$= \pi \times 3^2 \times 4$ (1)

$= 36\pi \text{ cm}^3$ (1)

Total: 2

2) Volume $= 28 \times 18$

$= 504 \text{ cm}^3$ (1)

Total: 1

3) Initial volume $= 15 \times 20 \times 20$

$= 6000 \text{ cm}^3$ (1)

New volume $= 6000 + 1000$

$= 7000 \text{ cm}^3$ (1)

Therefore $20 \times 20 \times d = 7000$ (1)

$400 \times d = 7000$

$d = 17.5 \text{ cm}$ (1)

Total: 4

4) Volume of cuboid $= 10 \times 10 \times 5$

$= 500 \text{ cm}^3$ (1)

Volume of hemisphere $= \frac{4}{3} \times \pi \times 4^3 \times \frac{1}{2}$ (1)

$= 134.04 \text{ cm}^3$ (1)

Total volume $= 134.04 + 500$ (1) $= 634.04 \text{ cm}^3$