

Push Tasks - Answers



1. Cube side x

$$SA = 6x^2$$

2. Prism l, w, h

$$SA = 2(lw+lh+wh)$$

3. Cube $s=6$, prism $9 \times 4 \times h$

$$216 = 2(36 + 13h) \rightarrow h = 72/13 \approx 5.54 \text{ cm}$$

4. Cuboid $20 \times 10 \times 8$

$$SA = 2(200 + 160 + 80) = 880 \text{ cm}^2$$

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7. Cylinder $SA=276\pi$, $r=6$
 $12\pi h+72\pi=276\pi \rightarrow h=17$ cm

8. Square prism $s=5$, $h=12$
 $SA = 2(25)+4(60) = 290$ cm²

9. Cube $SA=600$, find side
 $6s^2=600 \rightarrow s^2=100 \rightarrow s=10$ cm

10. Compare cuboids
158 vs 164; second greater by 6 cm²

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13. Square base 7, SA=238
 $98+28h=238 \rightarrow h=5$ cm

14. Cube edges double
Factor $2^2 = 4$

15. Cylinder r,h triple
Factor $3^2 = 9$

16. Cuboid 3:2:1, SA=352
 $22x^2=352 \rightarrow x=4 \rightarrow 12,8,4$