Questions from the homework?

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3 a) $A_{cylinder} = 2\pi r^2 + 2\pi rh$

$= 2\pi(1)^2 + 2\pi(1)(4)$

$= 2\pi + 8\pi$

$= 10\pi \text{ cm}^2$

$A_{box} = bh \times 6$

$= 4 \times 4 \times 6$

$= 96 \text{ cm}^2$

$\text{overlap} = \pi r^2 \times 2$

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

$= 2\pi$

$A_{total} = 10\pi + 96 - 2\pi$

$= 8\pi + 96$

$= 121.1 \text{ cm}^2$

3b) $A_{cylinder} = 2\pi r^2 + 2\pi rh$

$= 2\pi(0.5)^2 + 2\pi(0.5)(3)$

$= 0.5\pi + 3\pi$

$= 3.5\pi \text{ cm}^2$

$A_{box} = 2lxw + 2lh + 2wh$

$= 2(6 \times 4) + 2(6 \times 3) + 2(3 \times 4)$

$= 48 + 36 + 24$

$= 108 \text{ cm}^2$

$\text{overlap} = 2\pi r^2$

$= 0.5\pi$

$A_{total} = 3.5\pi + 108 - 0.5\pi$

$= 3\pi + 108$

$= 117.4 \text{ cm}^2$

Homework

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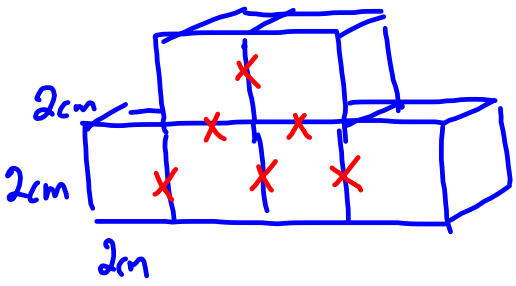

$A(1\ face) = bh$
$= 2 \times 2$
$= 4\ cm^2$

$A_{cube} = 4 \times 6$
$= 24\ cm^2$

$A(6\ cubes\ separated) = 24 \times 6$
$= 144\ cm^2$

$Overlap = 12 \times 4$
$= 48\ cm^2$

$A_{total} = 144 - 48$
$= 96\ cm^2$