Workout

Question 1:

(a) 314.16cm²

(b) 2463.01cm²

(c) 113.10cm²

(d) 21.24cm²

(e) 2290.22cm²

(f) 2.54mm²

Question 2:

(a) 196π cm²

(b) 64π cm²

(c) 4.84π m²

Question 3:

(a) 12.6cm²

(b) 16300mm²

(c) 2.01m²

(d) 13.5 square inches

Question 4:

(a) 1.99cm

(b) 8.65cm

(c) 39.09cm

Question 5:

(a) 2cm

(b) 5cm

(c) 60cm

Apply

Question 1: 190.852cm²

Question 2: 3cm radius – SA = 113.1cm² and 6cm radius – SA = 452.4cm², therefore 4 times larger

Question 3: $r = \sqrt{(A/4pi)}$

Question 4: Peter is incorrect

Approach 1: SA of Cube: $6x^2$ and SA sphere is $4\pi x^2$.

4π is approx 12.566, which is more than twice 6.

Approach 2: let x = 10cm (for example)

Sphere 1256.6cm² and cube 600cm²

So the surface area of the sphere is more than twice the cube's

Question 5

$4\pi x^2 = 2\pi x^2 + 2\pi xh$

$2\pi x^2 = 2\pi xh$

$x^2 = xh$

$x = h$ (since $x \neq 0$)