



a) $S \propto M^{\frac{2}{3}}$

b) $S = k M^{\frac{2}{3}}$

$$18600 = k 70^{\frac{2}{3}}$$

$$= k \times 1633\frac{1}{3}$$

$$18600 = k$$

$$1633\frac{1}{3}$$

$$\therefore k = 11\frac{19}{49}$$

$$S = k M^{\frac{2}{3}}$$

$$S = 11\frac{19}{49} \times 60^{\frac{2}{3}}$$

$$= 11\frac{19}{49} \times 1200$$

$$S = 13665.3 \text{ cm}^2$$

\therefore surface area human with mass
 $= 60 \text{ kg} = 13665.3 \text{ cm}^2$



c) ~~note~~

d) ~~$a^2 = b^2 + c^2 - 2bc \cos A$~~

~~$13^2 = 7^2 + 7^2 - 2 \times 7 \times 7 \cos 60^\circ$~~

~~$169 = b^2 + 49 - 14b \cos 60$~~

~~$120 = b^2 - 14b \cos 60$~~

$a^2 = b^2 + x^2 - 2bx \cos A$

$13^2 = 7^2 + x^2 - 2 \times 7 \times x \cos A$

$169 = 49 + x^2 - 14x \cos A$

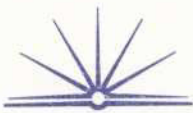
$120 = x^2 - 14x \cos 60$

$120 = x^2 - 14x \times 0.5$

$120 = x^2 - 7x$

$\frac{\sin 60}{13} = \frac{\sin B}{7}$

$\frac{7 \sin 60}{13} = \sin B$



d) cont

$$\frac{7 \sin 60}{13} = 27^{\circ} 58'$$

13

~~sin~~

∴ sin