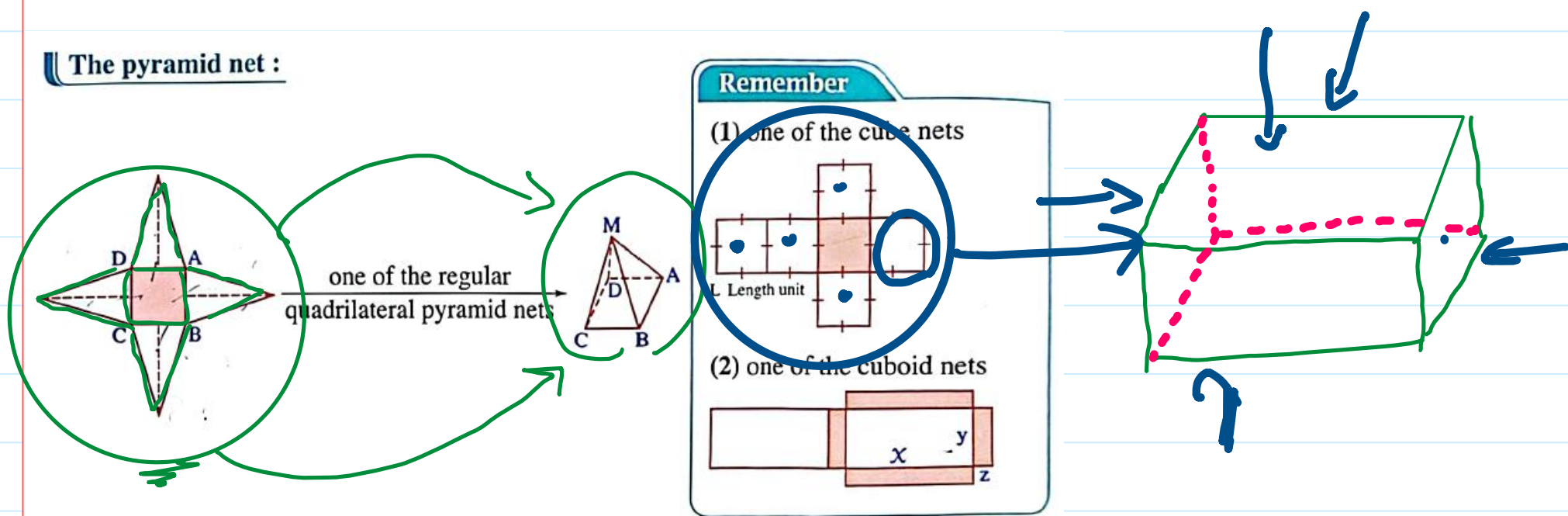


The pyramid net :



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From the net of the regular quadrilateral pyramid we note that :

- (1) It has 5 faces , four of them are lateral faces and one face to the base.
- (2) It has 8 edges , four of them are lateral edges.
- (3) It has 5 vertices , one of them (M) is called the vertex of the pyramid.

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Enrich your knowledge

Euler relation : For any solid in which its base as a polygon , then :

(Number of its faces + number of its vertices = number of its edges + 2)

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Pyramid_8

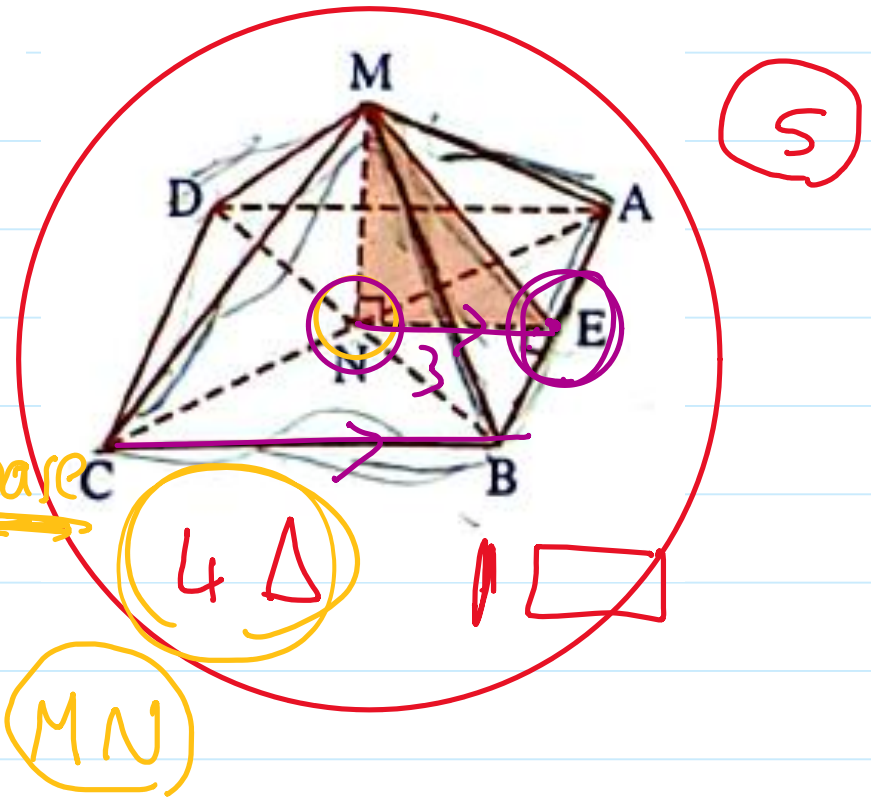
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A regular quadrilateral pyramid of volume 48 cm^3 and the length of its base edge = 6 cm .
Find its total surface area.

$$V = \frac{1}{3} \text{ base area} \cdot h$$

Lateral Area

$$A = \frac{1}{2} \cdot \text{base per.} \cdot h + A_{\text{base}}$$



$$48 = \frac{1}{3} \cdot 6^2 \cdot h$$

$$MN = h = \frac{48}{12} = 4 \text{ cm}$$

$$A = \frac{1}{2} \cdot [4 \cdot 6] \cdot 5 + 6 \cdot 6 = 96 \text{ cm}^2$$

$$\cancel{6 + 6 + 6 + 6}$$