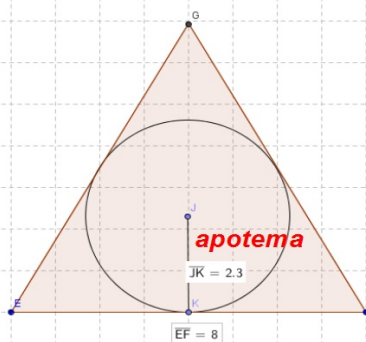
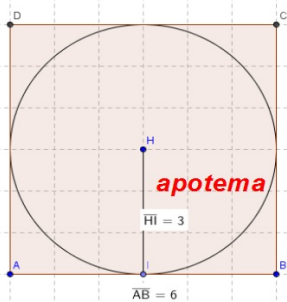
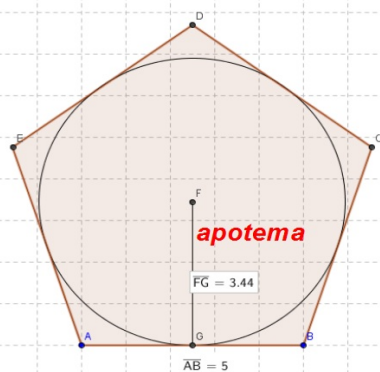
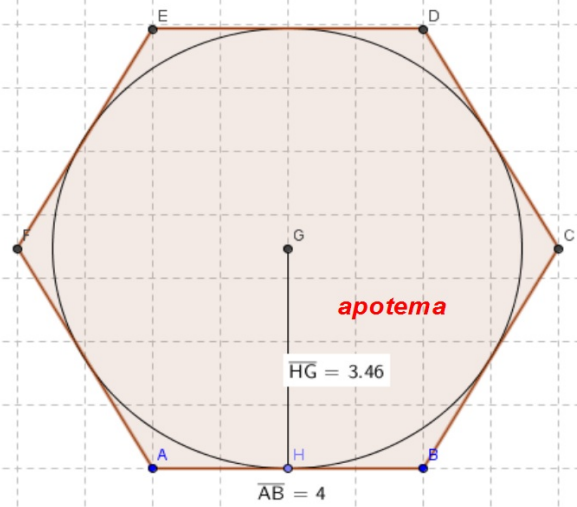
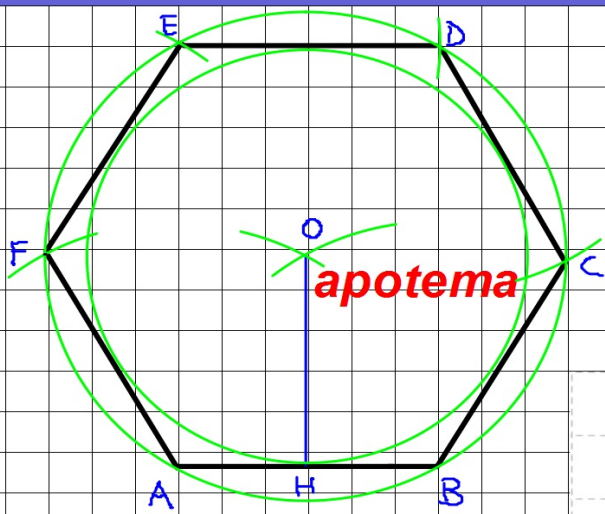
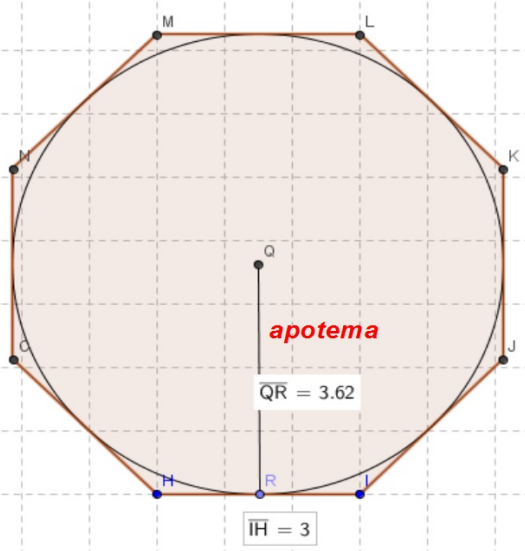
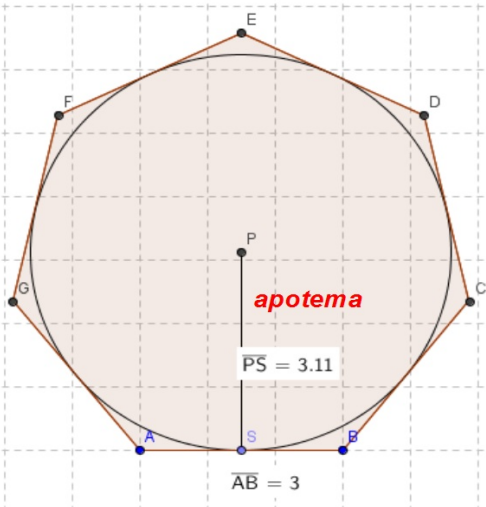


Determinare la formula dell'area dei poligoni regolari







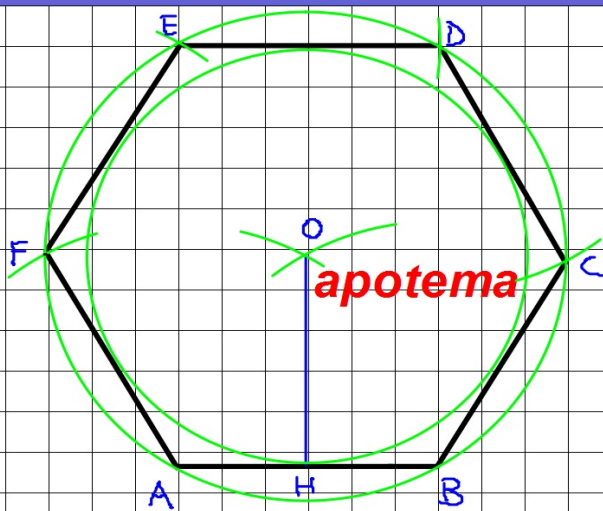
$$\begin{aligned}
 \text{Area}_{\text{poligono regolare}} &= \text{lato} \times \text{apotema} : 2 \times n_{\text{lati}} \\
 &= \text{lato} \times n_{\text{lati}} \times \text{apotema} : 2 = \\
 &= \text{perimetro} \times \text{apotema} : 2
 \end{aligned}$$

$$\text{Area}_{\text{poligono regolare}} = \text{Perimetro} \times \text{apotema} : 2$$

$$\text{apotema} = \text{lato} \times n_{\text{fisso}}$$

Nella seguente tabella puoi leggere i numeri fissi di alcuni poligoni regolari.

Poligono	Numero fisso f	Poligono	Numero fisso f
Triangolo	0,289	Ottagono	1,207
Quadrato	0,5	Ennagono	1,374
Pentagono	0,688	Decagono	1,539
Esagono	0,866	Endecagono	1,703
Ettagono	1,038	Dodecagono	1,866



$$A = \frac{2p \cdot a}{2} = \frac{l \cdot n_{\text{lati}} \cdot a}{2}$$

$$= \frac{l \cdot n_{\text{lati}} \cdot l \cdot n_{\text{fisso}}}{2} =$$

$$= l^2 \cdot \frac{n_{\text{lati}} \cdot n_{\text{fisso}}}{2}$$

$$A_{\text{esagono}} = l^2 \cdot \frac{6 \cdot 0,866}{2} = l^2 \cdot 2,598$$

$$\text{Area} = l^2 \cdot \varphi \rightarrow l = \sqrt{\frac{\text{Area}}{\varphi}}$$

Osserva nella seguente tabella questi nuovi numeri fissi per i principali poligoni regolari.

Poligono	Numero fisso φ	Poligono	Numero fisso φ	Poligono	Numero fisso φ
Triangolo	0,433	Esagono	2,598	Ennagono	6,182
Quadrato	1	Ettagono	3,634	Decagono	7,694
Pentagono	1,720	Ottagono	4,828	Dodecagono	11,196