RETTANGOLO

h b

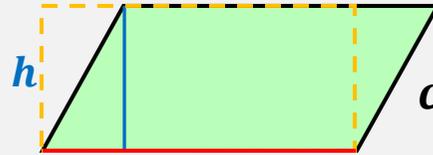p = perimetro

$p = 2(b+h)$

$b = \dfrac{p-2h}{2}$

$h = \dfrac{p-2b}{2}$

$A = b \times h$

$b = \dfrac{A}{h}$

$h = \dfrac{A}{b}$

PARALLELOGRAMMA

h b c

p = perimetro
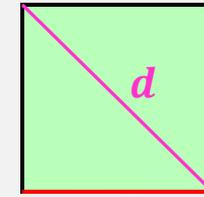
$p = 2(b+c)$

$b = \dfrac{p-2c}{2}$

$c = \dfrac{p-2b}{2}$

$A = b \times h$

$b = \dfrac{A}{h}$

$h = \dfrac{A}{b}$

QUADRATO

d ℓ

p = perimetro

$p = 4\,\ell$ $\qquad \ell = p : 4$

$A = \ell^2$ $\qquad \ell = \sqrt{A}$

$A = \dfrac{d^2}{2}$ $\qquad d = \sqrt{A \times 2}$

ROMBO

d_2 ℓ d_1
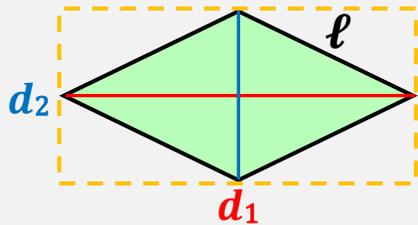
$p = 4\,\ell$ $\qquad \ell = p : 4$

$A = \dfrac{d_1 \times d_2}{2}$ $\qquad d_1 = \dfrac{2 \times A}{d_2}$

TRAPEZIO

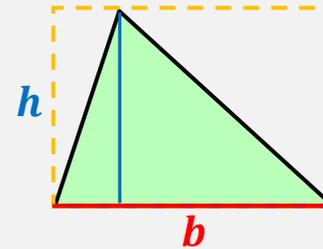b_2 h b_1 b_2
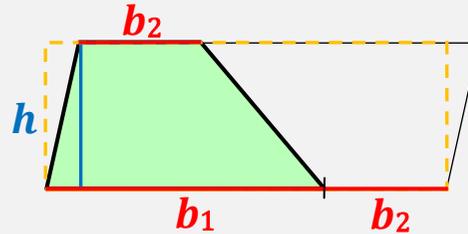
$A = \dfrac{(b_1+b_2) \times h}{2}$

$h = \dfrac{A \times 2}{b_1+b_2}$ $\qquad b_1 + b_2 = \dfrac{A \times 2}{h}$

TRIANGOLO

h b

$A = \dfrac{b \times h}{2}$

$h = \dfrac{A \times 2}{b}$ $\qquad b = \dfrac{A \times 2}{h}$

TRIANGOLO RETTANGOLO

c_2 i h_i c_1
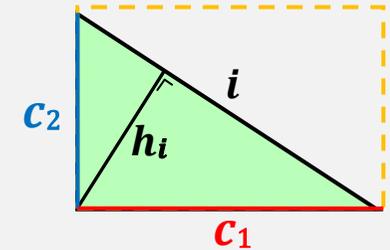
$A = \dfrac{c_1 \times c_2}{2}$ $\qquad c_1 = \dfrac{A \times 2}{c_2}$
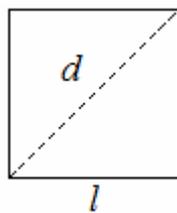
$h_i = \dfrac{c_1 \times c_2}{i}$
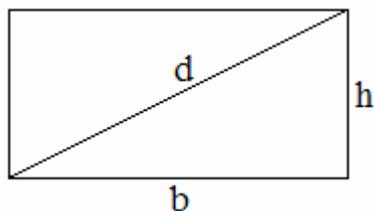
Rettangolo

$$\text{Area} = A = b \cdot h$$

$$b = \frac{A}{h}$$

$$h = \frac{A}{b}$$
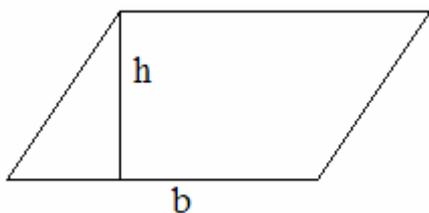
$$d = \sqrt{b^2 + h^2}$$

Quadrato

$$\text{Area} = A = l^2$$

$$l = \sqrt{A}$$

$$d = l\sqrt{2}$$

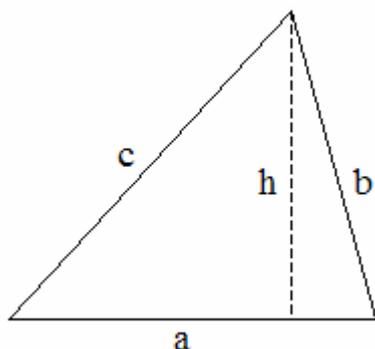$$l = \frac{d}{\sqrt{2}}$$

Parallelogramma

$$\text{Area} = A = b \cdot h$$

$$b = \frac{A}{h}$$

$$h = \frac{A}{b}$$

Triangolo scaleno
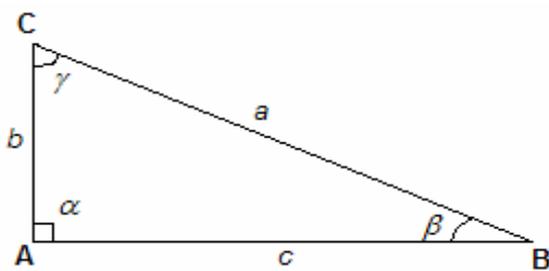
$$\text{Area} = A = \frac{b \cdot h}{2}$$

$$b = \frac{2 \cdot A}{h}$$

$$h = \frac{2 \cdot A}{b}$$

$A = \sqrt{p(p-a)(p-b)(p-c)}$, formula di Erone

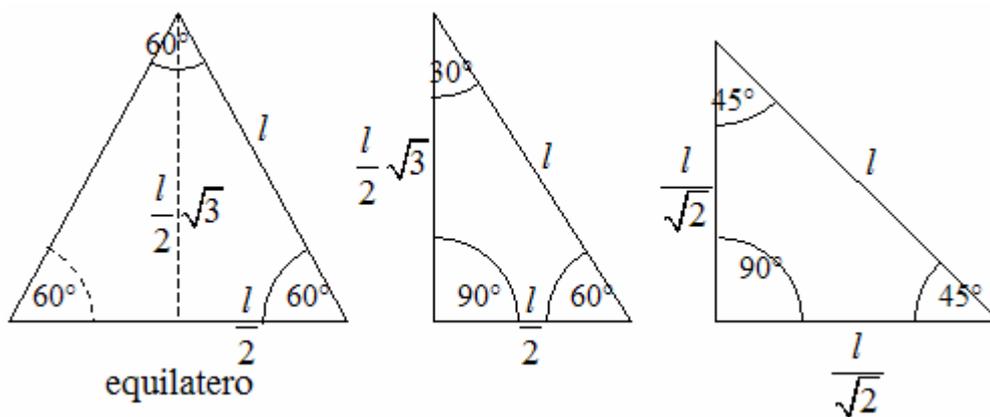$$p = \frac{a+b+c}{2}$$ è il _semiperimetro_

Triangolo rettangolo

$$\text{Area} = A = \frac{c \cdot h}{2} = \frac{a \cdot b}{2}$$
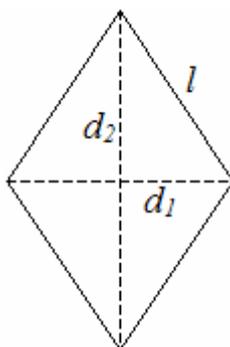
$$h = \frac{a \cdot b}{c}$$

Teorema di Pitagora:

$$c = \sqrt{a^2+b^2}, \quad a = \sqrt{c^2-b^2}, \quad b = \sqrt{c^2-a^2}$$

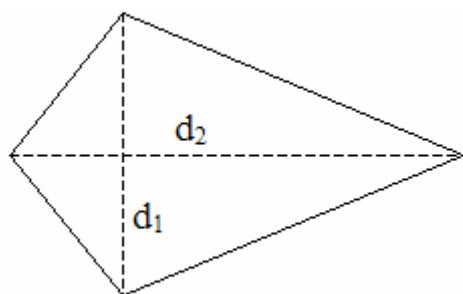# Triangoli particolari

equilatero

Rombo

$$\text{Perimetro} = 2p = 4 \cdot l$$

$$\text{Area} = A = \frac{d_1 \cdot d_2}{2}$$

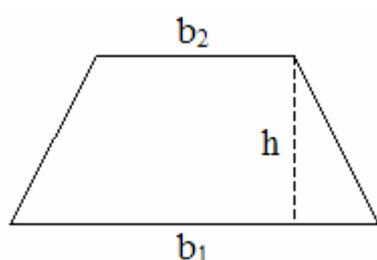$$d_1 = \frac{2A}{d_2}, \quad d_2 = \frac{2A}{d_1}$$

Deltoide

$$Area = A = \frac{d_1 \cdot d_2}{2}$$

$$d_1 = \frac{2A}{d_2}$$

$$d_2 = \frac{2A}{d_1}$$

Trapezio

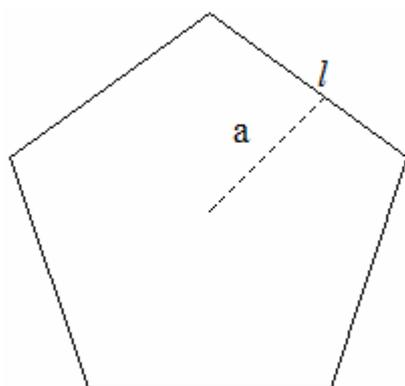$$Area = A = \frac{(b_1 + b_2) \cdot h}{2}$$

$$h = \frac{2A}{b_1 + b_2}$$

$$b_1 = \frac{2A}{h} - b_2$$

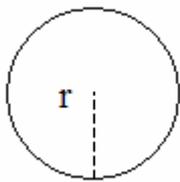$$b_2 = \frac{2A}{h} - b_1$$

Poligono regolare

$Area = A = 2p \cdot a = l^2 \cdot f$ (numero fisso)

$a = l \cdot N$ (numero fisso)

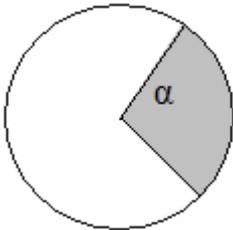| poligoni regolari		
	N numero fisso apotema	f numero fisso area
triangolo	0,289	0,433
quadrato	0,5	1
pentagono	0,688	1,72
esagono	0,866	2,598
ettagono	1,038	3,634
ottagono	1,207	4,828
ennagono	1,374	6,182
decagono	1,539	7,694

Circonferenza e cerchio

$$\text{Circonferenza} = C = 2\pi r \quad r = \frac{C}{2\pi}$$

$$\text{Area} = A = \pi r^2 \quad r = \sqrt{\frac{A}{\pi}}$$

$$\pi \approx 3,14$$

Settore circolare

$$l = \frac{\pi \cdot r \cdot \alpha}{180°}$$
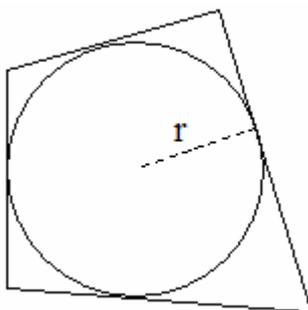
$$r = \frac{l \cdot 180°}{\pi \cdot \alpha}$$

$$\alpha = \frac{l \cdot 180°}{\pi \cdot r}$$

$$\text{Area} = A = \frac{\pi \cdot r^2}{360°} \cdot \alpha$$

$$r = \sqrt{\frac{A \cdot 360°}{\pi \cdot \alpha}}$$

$$\alpha = \frac{A \cdot 360°}{\pi \cdot r^2}$$
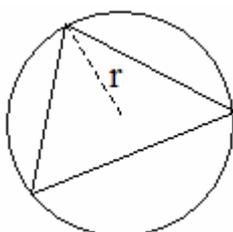
Poligono circoscritto a una circonferenza

$$\text{Area} = A = p \cdot r$$

$$r = \frac{A}{p}, \quad 2p = \frac{2A}{r}$$

$2p$ indica il perimetro

p indica il semiperimetro

Triangolo inscritto in una circonferenza

$$\text{Area} = A = \frac{a \cdot b \cdot c}{4 \cdot r}$$

$$r = \frac{a \cdot b \cdot c}{4 \cdot A}$$