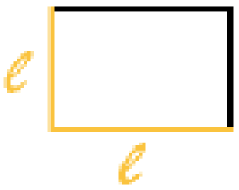
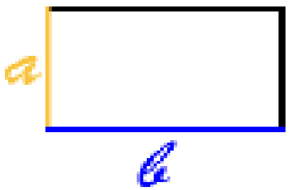
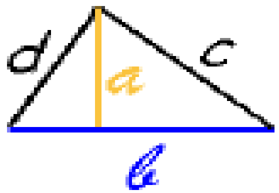
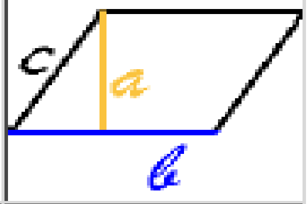
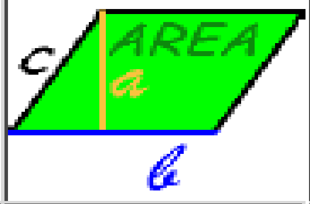
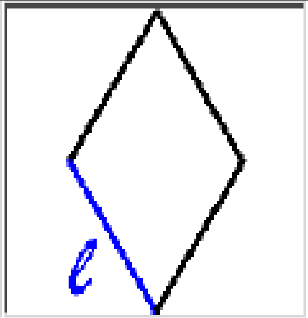
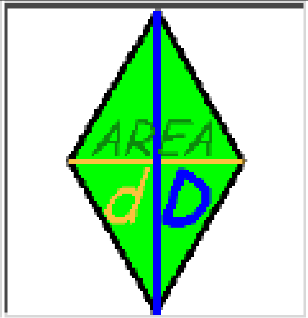
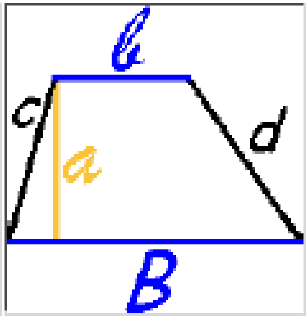
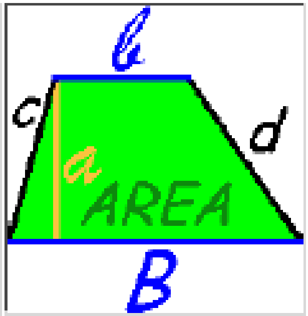
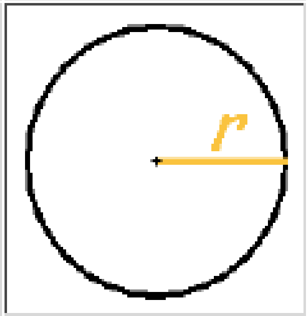
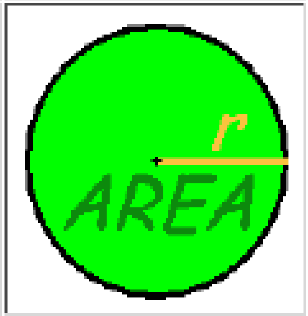
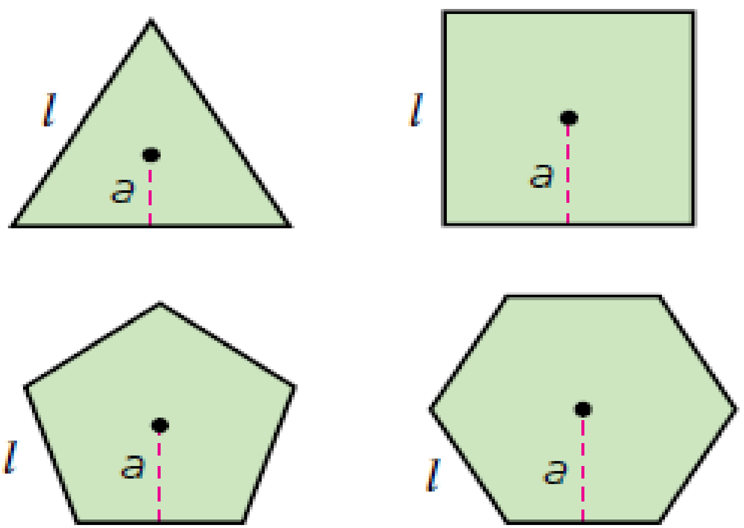
Geometria Piana

Figura	Perimetro	Formula perimetro	Formule inverse perimetro	Area	Formula area	Formule inverse area
Quadrato		$p = 4 \times \ell$	$\ell = \frac{p}{4}$		$A = \ell \times \ell$ oppure $A = \ell^2$	$\ell = \sqrt{A}$
Rettangolo		$p = 2 \times (a + b)$	$a = \frac{p}{2} - b$ $b = \frac{p}{2} - a$		$A = b \times a$	$a = \frac{A}{b}$ $b = \frac{A}{a}$
Triangolo		$p = b + c + d$	$b = p - c - d$ $c = p - b - d$ $d = p - b - c$		$A = \frac{b \times a}{2}$	$a = \frac{2 \times A}{b}$ $b = \frac{2 \times A}{a}$
Parallelo-gramma		$p = 2 \times (b + c)$	$c = \frac{p}{2} - b$ $b = \frac{p}{2} - c$		$A = b \times a$	$a = \frac{A}{b}$ $b = \frac{A}{a}$

Rombo		$p = 4 \times l$	$l = \frac{p}{4}$		$A = \frac{D \times d}{2}$	$d = \frac{2 \times A}{D}$ $D = \frac{2 \times A}{d}$
Trapezio		$p = B + b + c + d$	$B = p - b - c - d$ $b = p - B - c - d$ $c = p - B - b - d$ $d = p - B - b - c$		$A = \frac{(B + b) \times a}{2}$	$a = \frac{2 \times A}{B + b}$ $b = \frac{2 \times A}{a} - B$ $B = \frac{2 \times A}{a} - b$
Cerchio		$p = 2 \times \pi \times r$ $p = 2 \times 3{,}14 \times r$ $p = 6{,}28 \times r$	$r = \frac{p}{2 \times \pi}$ $r = \frac{p}{6{,}28}$		$A = \pi \times r^2$ oppure $A = 3{,}14 \times r^2$	$r = \sqrt{\frac{A}{\pi}}$ oppure $r = \sqrt{\frac{A}{3{,}14}}$

Focus: poligoni regolari

Poligono regolare



a: apotema
l: lato
n: numero di lati
f: numero fisso

$$a = l \cdot f$$

$$A = \frac{p \cdot a}{2} \quad \text{oppure}$$

$$A = \frac{n \cdot l^2 \cdot f}{2}$$

$$a = \frac{A \cdot 2}{p} \qquad p = \frac{A \cdot 2}{a}$$

Focus: cerchio e circonferenza

Lunghezza della circonferenza: $C = 2\pi r$

Area del cerchio: $A = \pi r^2$

Lunghezza dell'arco: $l = \dfrac{C\alpha}{360}$ $\quad \alpha$ misurato in gradi

Area del settore circolare: $A = \dfrac{\pi r^2 \alpha}{360}$; $A = \dfrac{1}{2} r^2 \alpha$

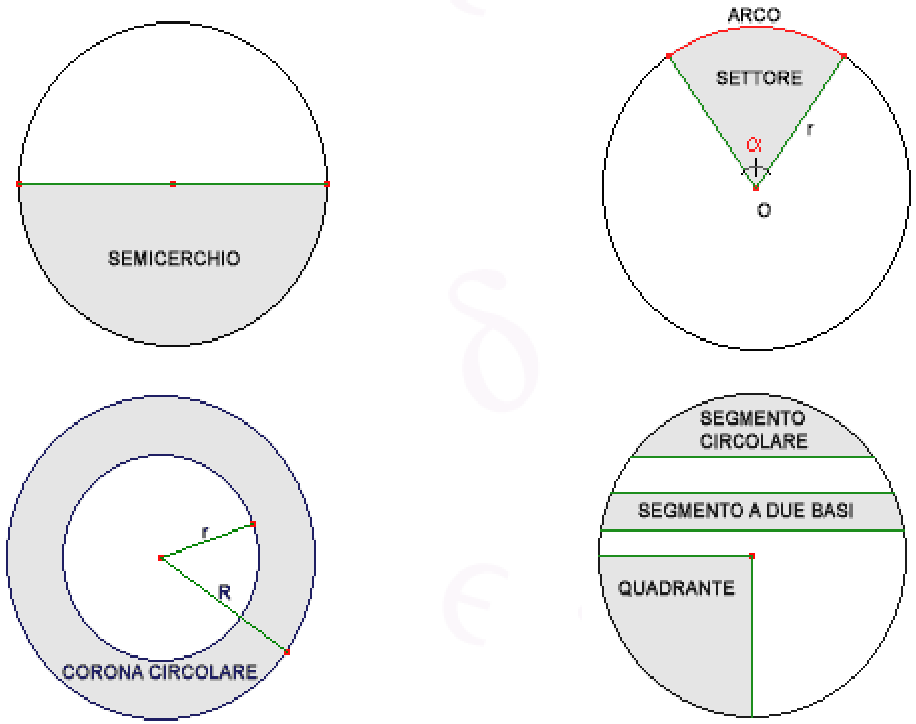
Area del semicerchio: $A = \dfrac{1}{2}\pi r^2$

Area del quadrante: $A = \dfrac{1}{4}\pi r^2$

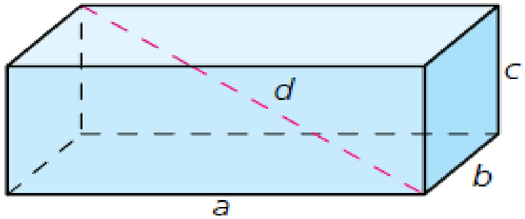
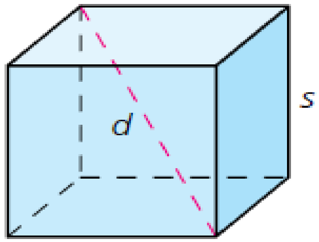
Area della corona circolare: $A = \pi\left(R^2 - r^2\right)$

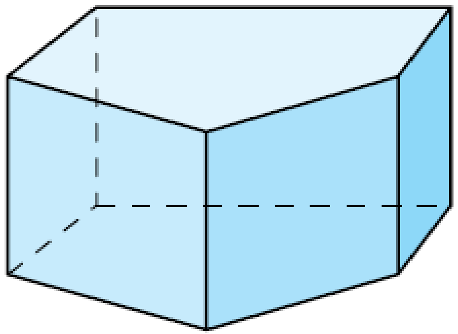
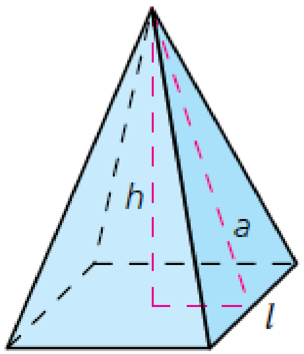
LEGENDA

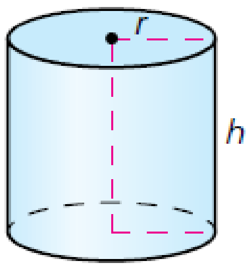
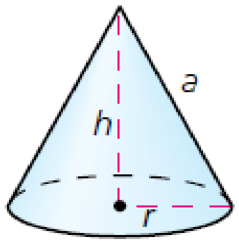
Raggio = r

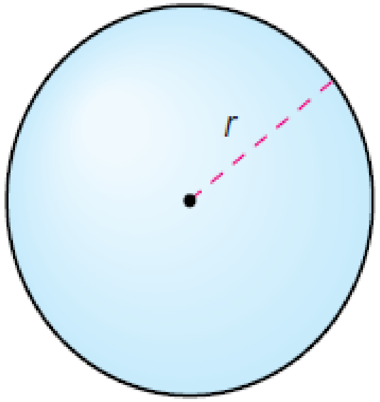


Geometria Solida

Solido	Formule dirette	Formule inverse
Parallelepipedo rettangolo  	$A_l = p_b h$ oppure $A_l = 2(ab + bc)$ $A_t = A_l + 2A_b$ oppure $A_t = 2(ab + ac + bc)$ $V = abc$ oppure $V = A_b h$ $d = \sqrt{a^2 + b^2 + c^2}$	$p_b = \frac{A_l}{h}$ $h = \frac{A_l}{p_b}$ $A_l = A_t - 2A_b$ $A_b = \frac{A_t - A_l}{2}$ $A_b = \frac{V}{h}$ $h = \frac{V}{A_b}$
Cubo  	Come il parallelepipedo, oppure: $A_l = 4s^2$ $A_t = 6s^2$ $V = s^3$ $d = s\sqrt{3} \approx s \cdot 1{,}73$	$s = \sqrt{\frac{A_l}{4}}$ $s = \sqrt{\frac{A_t}{6}}$ $s = \sqrt[3]{V}$

Solido	Formule dirette	Formule inverse
Prisma retto 	$A_l = p_b h$ $A_t = A_l + 2A_b$ $V = A_b h$	$p_b = \frac{A_l}{h}$ $\quad h = \frac{A_l}{p_b}$ $A_l = A_t - 2A_b$ $\quad A_b = \frac{A_t - A_l}{2}$ $A_b = \frac{V}{h}$ $\quad h = \frac{V}{A_b}$
Piramide retta 	$A_l = \frac{p_b a}{2}$ $\quad A_t = A_l + A_b$ $V = \frac{A_b h}{3}$	$p_b = \frac{2A_l}{a}$ $\quad a = \frac{2A_l}{p_b}$ $A_b = \frac{3V}{h}$ $\quad h = \frac{3V}{A_b}$

Solido	Formule dirette	Formule inverse
Cilindro 	$A_l = 2\pi r h$ $\quad A_t = A_l + 2A_b$ $V = \pi r^2 h$	$r = \dfrac{A}{2\pi h}$ $\quad h = \dfrac{A}{2\pi r}$ $A_l = A_t - 2A_b$ $\quad A_b = \dfrac{A_t - A_l}{2}$ $h = \dfrac{V}{\pi r^2}$ $\quad r = \sqrt{\dfrac{V}{\pi h}}$
Cono  C: misura della circonferenza di base	$A_l = \dfrac{C \cdot a}{2} = \pi r a$ $A_l = \pi r a$ $A_t = A_l + A_b = \pi r a + \pi r^2$ $V = \dfrac{\pi r^2 h}{3}$	$a = \dfrac{A_l}{\pi r}$ $\quad r = \dfrac{A_l}{\pi a}$ $r = \sqrt{\dfrac{3V}{\pi h}}$ $\quad h = \dfrac{3V}{\pi r^2}$

Solido	Formule dirette	Formule inverse
Sfera 	$A = 4\pi r^2$ $V = \frac{4}{3}\pi r^3$	$r = \sqrt{\frac{A}{4\pi}}$ $r = \sqrt[3]{\frac{3V}{4\pi}}$

Poliedri regolari	Area totale	Volume
Tetraedro	$4 \cdot l^2 \cdot 0{,}433$	$l^3 \cdot 0{,}117$
Esaedro o Cubo	$6 \cdot l^2$	$l^3 \cdot 1$
Ottaedro	$8 \cdot l^2 \cdot 0{,}433$	$l^3 \cdot 0{,}471$
Dodecaedro	$12 \cdot l^2 \cdot 1{,}720$	$l^3 \cdot 7{,}663$
Icosaedro	$20 \cdot l^2 \cdot 0{,}433$	$l^3 \cdot 2{,}182$