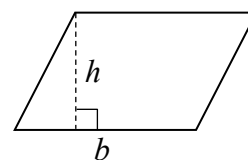


Formler i matematik som får användas på ämnesprovet i årskurs 9

PREFIX

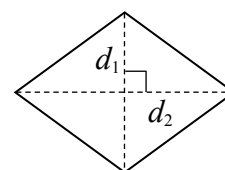
Beteckning Namn Tiopotens	T tera 10^{12}	G giga 10^9	M mega 10^6	k kilo 10^3	h hekto 10^2	d deci 10^{-1}	c centi 10^{-2}	m milli 10^{-3}	μ mikro 10^{-6}	n nano 10^{-9}
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GEOMETRI **Parallelogram** area = $b \cdot h$



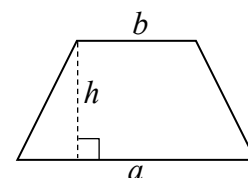
Romb

area = $\frac{d_1 \cdot d_2}{2}$
 d_1 och d_2 är diagonaler



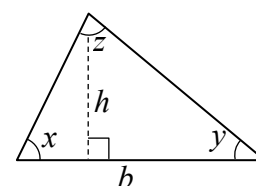
Parallelltrapets

area = $\frac{h(a+b)}{2}$



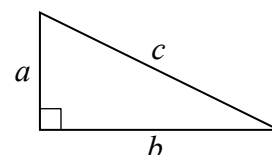
Triangel

area = $\frac{b \cdot h}{2}$
vinkelsumma =
 $x + y + z = 180^\circ$



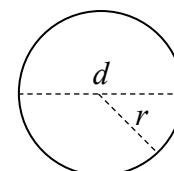
Pythagoras sats

$a^2 + b^2 = c^2$



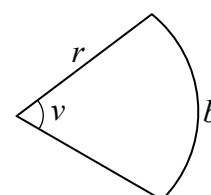
Cirkel

area = $\pi \cdot r^2$
omkrets = $\pi \cdot d = 2\pi r$

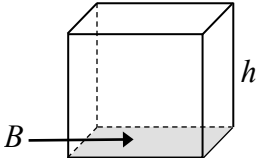
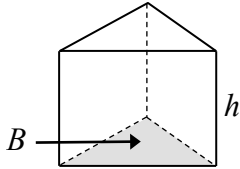
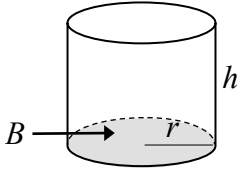
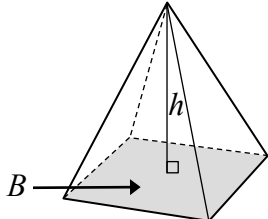
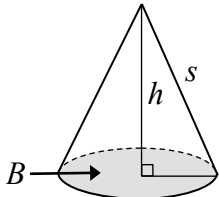
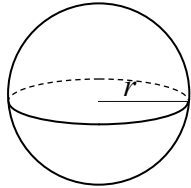


Cirkelsektor

bågen $b = \frac{v}{360} \cdot 2\pi r$
area = $\frac{v}{360} \cdot \pi r^2 = \frac{b \cdot r}{2}$



Var god vänd!

Rätblock	$\text{volym} = B \cdot h$	
Prisma	$\text{volym} = B \cdot h$	
Cylinder	<i>Rak cirkulär cylinder</i> $\text{volym} = B \cdot h$ $\text{mantelarea} = 2\pi rh$	
Pyramid	$\text{volym} = \frac{B \cdot h}{3}$	
Kon	<i>Rak cirkulär kon</i> $\text{volym} = \frac{B \cdot h}{3}$ $\text{mantelarea} = \pi rs$	
Klot	$\text{volym} = \frac{4 \cdot \pi \cdot r^3}{3}$ $\text{area} = 4\pi r^2$	
Skala	$\text{areaskala} = (\text{längdskala})^2$ $\text{volym skala} = (\text{längdskala})^3$	
SAMBAND	Räta linjen	$y = kx + m$ om $y = kx$ är y proportionell mot x
POTENSER	För alla tal x och y och positiva tal a gäller	
	$a^x \cdot a^y = a^{x+y}$	$\frac{a^x}{a^y} = a^{x-y}$
	$a^{-x} = \frac{1}{a^x}$	$(a^x)^y = a^{xy}$
	$a^0 = 1$	