Formler m.m. till ämnesprovet i matematik, årskurs 9

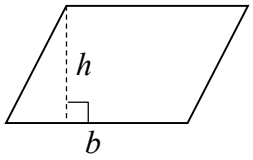
PREFIX

Beteckning	T	G	M	k	h	d	c	m	µ	n
Namn	tera	giga	mega	kilo	hekto	deci	centi	milli	mikro	nano
Tiopotens	10^{12}	10^{9}	10^{6}	10^{3}	10^{2}	10^{-1}	10^{-2}	10^{-3}	10^{-6}	10^{-9}

GEOMETRI

Parallellogram

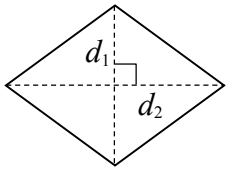
$\text{area} = b \cdot h$



Romb

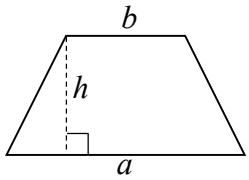
$\text{area} = \dfrac{d_1 \cdot d_2}{2}$

d_1 och d_2 är diagonaler



Parallelltrapets

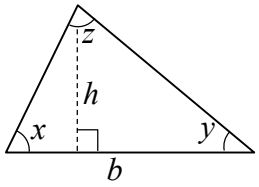
$\text{area} = \dfrac{h(a+b)}{2}$



Triangel

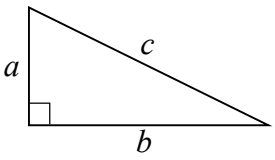
$\text{area} = \dfrac{b \cdot h}{2}$

vinkelsumma =
$x + y + z = 180°$



Pythagoras sats

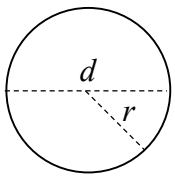
$a^2 + b^2 = c^2$



Cirkel

$\text{area} = \pi \cdot r^2$

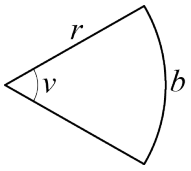
$\text{omkrets} = \pi \cdot d = 2 \cdot \pi \cdot r$



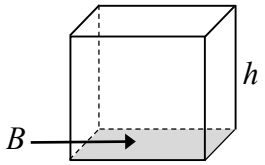
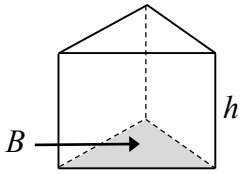
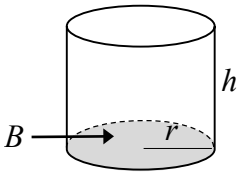
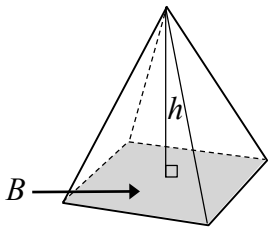
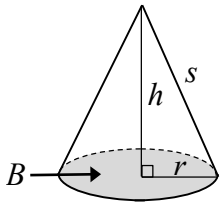
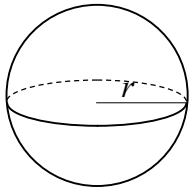
Cirkelsektor

bågen $b = \dfrac{v}{360} \cdot 2 \cdot \pi \cdot r$

$\text{area} = \dfrac{v}{360} \cdot \pi \cdot r^2 = \dfrac{b \cdot r}{2}$



Var god vänd!

	Rätblock	volym $= B \cdot h$	
	Prisma	volym $= B \cdot h$	
	Cylinder	*Rak cirkulär cylinder* volym $= B \cdot h$ mantelarea $= 2 \cdot \pi \cdot r \cdot h$	
	Pyramid	volym $= \dfrac{B \cdot h}{3}$	
	Kon	*Rak cirkulär kon* volym $= \dfrac{B \cdot h}{3}$ mantelarea $= \pi \cdot r \cdot s$	
	Klot	volym $= \dfrac{4 \cdot \pi \cdot r^3}{3}$ area $= 4 \cdot \pi \cdot r^2$	
	Skala	areaskala = (längdskala)^2 volymskala = (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		
	$a^x \cdot a^y = a^{x+y}$	$\dfrac{a^x}{a^y} = a^{x-y}$	$\left(a^x\right)^y = a^{xy}$
	$a^{-x} = \dfrac{1}{a^x}$	$a^0 = 1$	