Formelblad till nationellt prov i matematik, årskurs 9

PREFIX

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

POTENSER

För alla tal x och y och positiva tal a gäller

$$a^x \cdot a^y = a^{x+y} \qquad \frac{a^x}{a^y} = a^{x-y} \qquad \left(a^x\right)^y = a^{x \cdot y} \qquad a^{-x} = \frac{1}{a^x} \qquad a^0 = 1$$

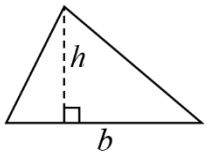
FUNKTIONER

Räta linjens ekvation $y = kx + m$

GEOMETRI

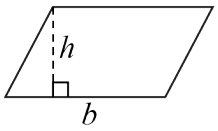
Triangel

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



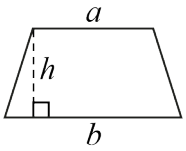
Parallellogram

$$A = b \cdot h$$



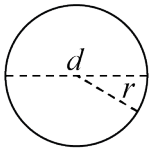
Parallelltrapets

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



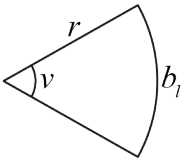
Cirkel

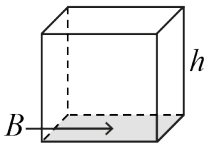
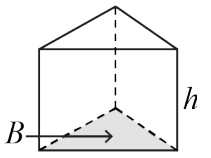
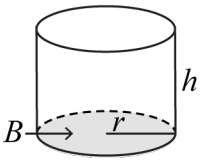
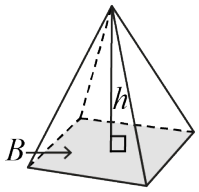
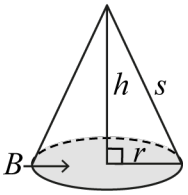
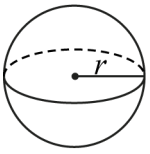
$$A = \pi \cdot r^2$$
$$O = \pi \cdot d = 2 \cdot \pi \cdot r$$



Cirkelsektor

$$A = \frac{v}{360°} \cdot \pi \cdot r^2$$
$$b_l = \frac{v}{360°} \cdot 2 \cdot \pi \cdot r$$



Rätblock	$V = B \cdot h$	
Prisma	$V = B \cdot h$	
Cylinder Rak cirkulär	$V = B \cdot h$ Mantelarea $A_m = 2 \cdot \pi \cdot r \cdot h$	
Pyramid	$V = \frac{B \cdot h}{3}$	
Kon Rak cirkulär	$V = \frac{B \cdot h}{3}$ Mantelarea $A_m = \pi \cdot r \cdot s$	
Klot	$V = \frac{4 \cdot \pi \cdot r^3}{3}$ $A = 4 \cdot \pi \cdot r^2$	
Skala	areaskala = (längdskala)^2 volymskala = (längdskala)^3	
Pythagoras sats	$a^2 + b^2 = c^2$