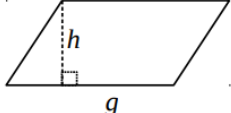
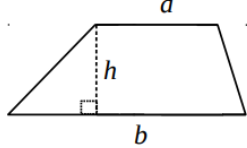
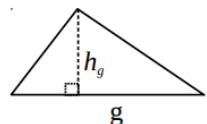
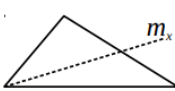
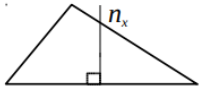
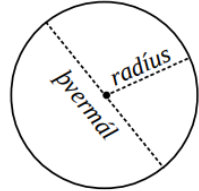
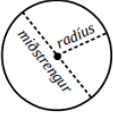
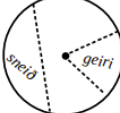
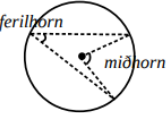
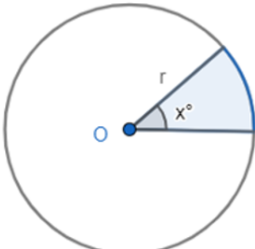
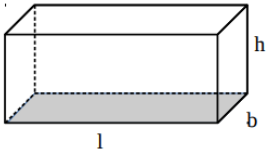
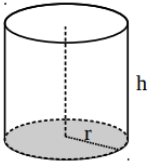
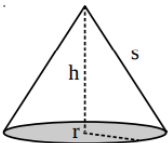
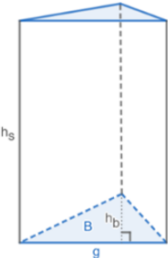
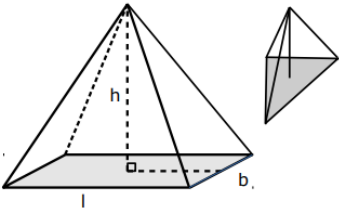
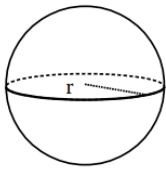
	RÉTTHYRNINGUR Ferhyrningur með öll horn rétt, gagnstæðar hliðar jafn langar. $F = a \cdot b$ $U = 2a + 2b \quad (\text{þ.e. summa allra hliðarlengda}).$ FERNINGUR er rétthyrningur með allar hliðar jafn langar.
	SAMSÍÐUNUGR Ferhyrningur með gagnstæðar hliðar jafn langar og gagnstæð horn jafn stór. $F = g \cdot h$ $U = \text{summa allra hliðarlengda}.$
	TRAPISA Ferhyrningur með tvær gagnstæðar hliðar samsíða en hinar ekki. $F = \frac{a+b}{2} \cdot h \quad (a \parallel b)$ $U = \text{summa allra hliðarlengda}.$
	ÞRÍHYRNINGUR Flatarmál þríhyrnings finnst með því að margfalda saman lengd einnar hliðar (grunnlínu) og hæðina á þá hlið og deila með 2 $F = \frac{g \cdot h}{2}$ $U = \text{summa allra hliðarlengda}.$
 <u>helmingalína horns</u>  <u>miðlína á hlið</u>  <u>miðþverill</u>	
$\sin(A^\circ) = \frac{\text{mótl.}}{\text{langhl.}}$ $\cos(A^\circ) = \frac{\text{aðl.}}{\text{langhl.}}$ $\tan(A^\circ) = \frac{\text{mótl.}}{\text{aðl.}}$	
	HRINGUR Hlutfallið milli ummáls og þvermáls hrings kallast „pí“. $\pi = 3.14159265359...$ $F = r^2 \cdot \pi$ $U = p \cdot \pi$   
	Flatarmál geira: $F = \frac{\pi \cdot r^2}{360^\circ} \cdot x^\circ$ Ummál geira: $U = \frac{2 \cdot \pi \cdot r}{360^\circ} \cdot x^\circ + 2 \cdot r$

Horna- og rúmfræði formúlublað

Tvíníð og þrívíð form

V merkir rúmmál
Y merkir yfirborðsflatarmál
B merkir flatarmál botnflatar

	FERSTRENDINGUR (kassi) $V = B \cdot h \quad (\text{sem er } l \cdot b \cdot h)$ $Y = \text{summa flatarmáls allra hliða.}$
	SÍVALNINGUR $V = r^2 \cdot \pi \cdot h \quad (\text{flatarmál botnflatar margf. með hæð})$ $Y = (p \cdot \pi \cdot h) + 2(r^2 \cdot \pi) \quad (\text{summa möttuls og enda})$ $(\text{ummál botnflatar margf. með hæð}) + (\text{tveir hringfletir})$
	KEILA $V = \frac{r^2 \cdot \pi \cdot h}{3} \quad (\text{þriðjungur úr sívalningi})$ $Y = (r^2 \cdot \pi) + (r \cdot \pi \cdot s) \quad (\text{summa botns og möttuls})$
	<u>Þrístrengingur</u> Botnflötur: $B = \frac{g \cdot h_b}{2}$ Rúmmál: $V = \frac{g \cdot h_b}{2} \cdot h_s$
	PÝRAMÍDI $V = \frac{B \cdot h}{3} \quad (B \text{ er flatarmál grunnflatar})$ $Y = B + \text{flatarmál allra þríhyrndra hliða}$
	KÚLA $V = \frac{4 \cdot r^3 \cdot \pi}{3}$ $Y = 4 \cdot r^2 \cdot \pi$
MÆLIEININGAR	1 cm³ = 1 ml 1 dm³ = 1 ltr 1 m³ = 1000 ltr
km - hm - dam - <u>m</u> - dm - cm - mm 1 ltr. = 1000 ml // 1m = 10 dm // 1m² = 100 dm² // 1 m³ = 1000 dm³	

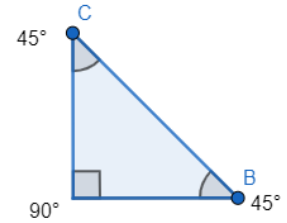
Horna- og rúmfræði formúlublað

Tvíníð og þríníð form

Sérstakir þríhyrningar:

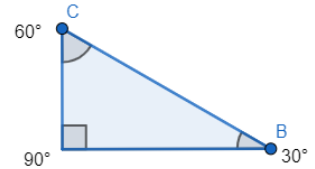
a) Í *jafnarma* þríhyrningi með 45° , 45° og 90° horn er:

- Skammhliðar eru jafnlangar (*jafnarma*)
- Langhlið = skammhlið $\cdot \sqrt{2}$



b) Í þríhyrningi með 30° , 60° og 90° horn er:

- Langhlið = 2·styttri skammhlið
- Lengri skammhlið = styttri skammhlið $\cdot \sqrt{3}$



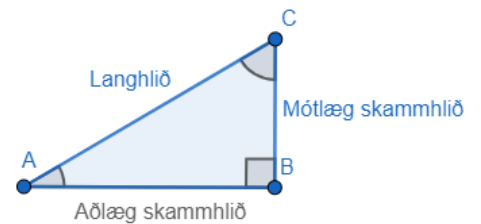
Hornaföll

Í rétthyrmdum þríhyrningi gildir fyrir hvasst horn (A):

$$\sin(A) = \frac{\text{mótlæg skammhlið}}{\text{langhlið}}$$

$$\cos(A) = \frac{\text{aðlæg skammhlið}}{\text{langhlið}}$$

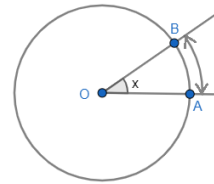
$$\tan(A) = \frac{\text{mótlæg skammhlið}}{\text{aðlæg skammhlið}}$$



Hornasumma n-hyrnings er: $(n-2) \cdot 180^\circ$

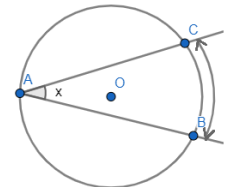
Miðhorn: Stærð hornsins er jöfn stærð boga sem það spannar

$$\angle x = \text{hringboginn } AB$$



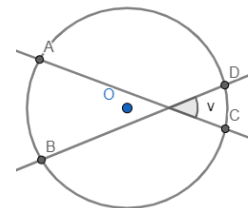
Ferilhörn: Stærð hornsins er jafnt hálfum boganum sem það spannar.

$$\angle x = \frac{\text{hringboginn } BC}{2}$$

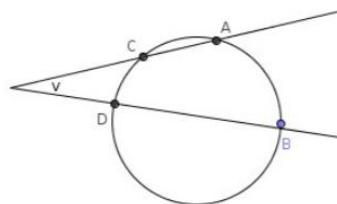


Innanvert horn: Stærð hornsins er jafnt hálfri summu boganna sem þau spanna.

$$\angle v = \frac{AB + CD}{2}$$



Utanvert horn: Stærð hornsins er jöfn hálfum mismuni boganna sem það spannar



$$V = \frac{AB - CD}{2}$$