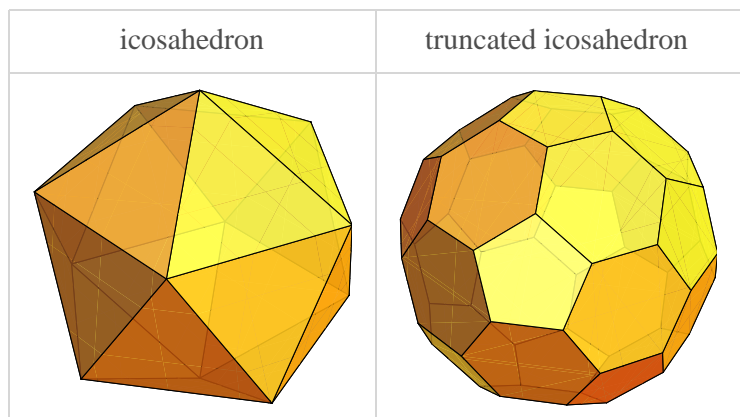# WolframAlpha™ computational™ knowledge engine

icosahedron, truncated icosahedron

Input interpretation:

icosahedron | truncated icosahedron

Image:

icosahedron	truncated icosahedron

Alternate names:

	truncated icosahedron
alternate names	soccer ball	football	buckyball

Combinatorial properties:

	icosahedron	truncated icosahedron
vertices	12	60
edges	30	90
faces	20	32

Geometric properties:

	icosahedron	truncated icosahedron
volume	$\frac{5}{12}\left(3+\sqrt{5}\right)$	$\frac{1}{4}\left(125+43\sqrt{5}\right)$
surface area	$5\sqrt{3}$	$3\sqrt{5\left(65+2\sqrt{5}+4\sqrt{75+30\sqrt{5}}\right)}$
circumradius	$\frac{1}{4}\sqrt{10+2\sqrt{5}}$	$\frac{1}{4}\sqrt{58+18\sqrt{5}}$
midradius	$\frac{\phi}{2}$	$\frac{3}{4}\left(1+\sqrt{5}\right)$
inradius	$\frac{1}{12}\left(3\sqrt{3}+\sqrt{15}\right)$	$\frac{9}{872}\left(21+\sqrt{5}\right)\sqrt{58+18\sqrt{5}}$
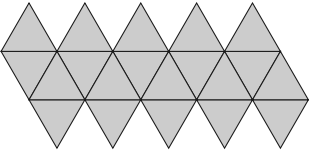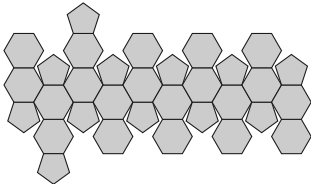
Schläfli symbol:

	icosahedron	truncated icosahedron
Schläfli symbol	{3, 5}	t{3, 5}
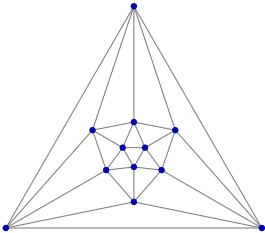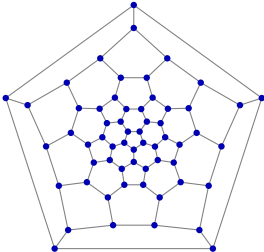
Wythoff symbol:

	icosahedron	truncated icosahedron
Wythoff symbol	5 | 2 3	2 5 | 3

Net:

	icosahedron	truncated icosahedron
net image		

Skeleton graph:

icosahedron	truncated icosahedron

Dual polyhedron:

	icosahedron	truncated icosahedron
name of dual polyhedron	dodecahedron	pentakis dodecahedron

Common properties:

amphichiral polyhedron | convex polyhedron |
equilateral polyhedron | rigid polyhedron | uniform polyhedron