

What happens when we double dimensions of different shapes?

If I double the...	Of a...	Then the...	Is multiplied by...	Formula	Formula (rewritten)
length and width	rectangle	perimeter	2	$P = 2l + 2w$	$P = 2 \cdot l + 2 \cdot w$
length and width	rectangle	area	4	$A = lw$	$A = l \cdot w$
width	rectangular prism	volume	2	$V = lwh$	$V = l \cdot w \cdot h$
width and height	rectangular prism	volume	4	$V = lwh$	$V = l \cdot w \cdot h$
width, height, and length	rectangular prism	volume	8	$V = lwh$	$V = l \cdot w \cdot h$
radius	circle	circumference	2	$C = 2\pi r$	$C = 2 \cdot \pi \cdot r$
radius	circle	area	4	$A = \pi r^2$	$A = \pi \cdot r \cdot r$
radius	sphere	surface area	4	$SA = 4\pi r^2$	$SA = 4 \cdot \pi \cdot r \cdot r$
radius	sphere	volume	8	$V = 4/3\pi r^3$	$V = 4/3 \cdot \pi \cdot r \cdot r \cdot r$
radius	cylinder	curved surface area	2	$CSA = 2\pi rh$	$CSA = 2 \cdot \pi \cdot r \cdot h$
height	cylinder	volume	2	$V = \pi r^2 h$	$V = \pi \cdot r \cdot r \cdot h$
radius and height	cylinder	volume	8	$V = \pi r^2 h$	$V = \pi \cdot r \cdot r \cdot h$
base radius	cone	volume	4	$V = 1/3\pi r^2 h$	$V = 1/3 \cdot \pi \cdot r \cdot r \cdot h$
height and base radius	cone	volume	8	$V = 1/3\pi r^2 h$	$V = 1/3 \cdot \pi \cdot r \cdot r \cdot h$

What do you notice?