

Changing the subject of a formula is a useful skill, for example, if the volume of a cone is known but not the radius.

The standard formula can be rearranged to find R.

Volume equals one third of pi R squared H.

Both sides are equal, so first flip the equation around so that R appears on the left.

Now isolate R.

Multiply both sides by three to remove the one third.

Pi R squared H equals three V.

Divide both sides by pi H.

Which gives R squared equals three V over pi H and to get R on its own, take the square root of both sides:

So, R equals the square root of three V over pi H.

So, V equals one third of pi R squared times H can be arranged as R equal the square root of three V over pi H.