

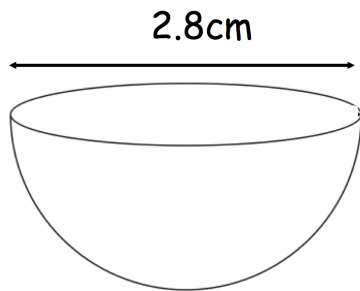
Show the region which satisfies

$$y > x - 1$$

$$y \leq 3$$

$$y > 2 - x$$

Solve  $y^2 - 6y = 27$



Calculate the volume of the hemisphere.

Material A has a density of  $8.2\text{g/cm}^3$   
Material B has a density of  $1.5\text{g/cm}^3$

Material A and material B are mixed in the ratio 5:2 to make material C.

Altogether there is 2.1kg of material C

Work out the volume of material C

A restaurant has 7 starters, 12 mains and 5 desserts on its menu.

Liam is going to choose a main course and either a starter or dessert.

How many different combinations can Liam choose?