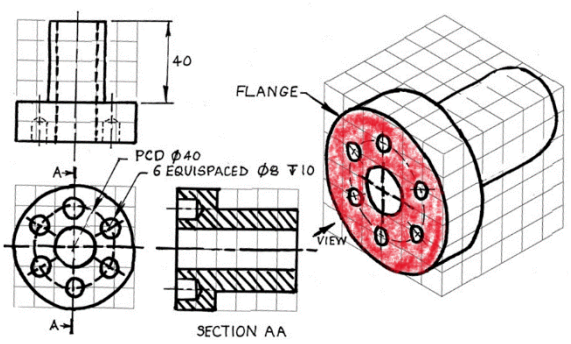
Engineering Graphics Overview - Features of Engineered Components

A Flange, PCD, a Spigot and Recess

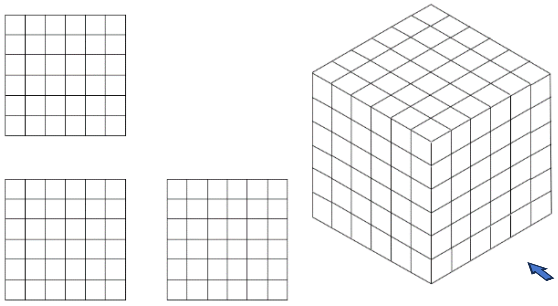
Q1 Describe the characteristics and an application of a 'Flange'.
What is PCD (Pitch Circle Diameter)?
Redraw the orthogonal views and the pictorial view.



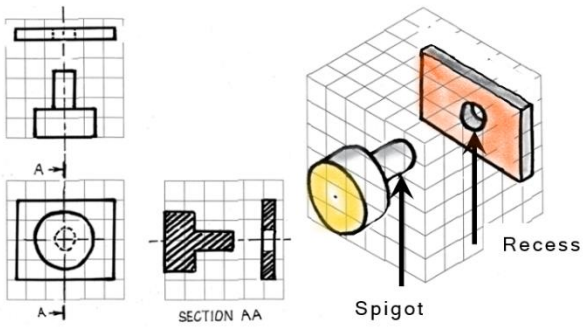
A Flange

PCD

Redraw



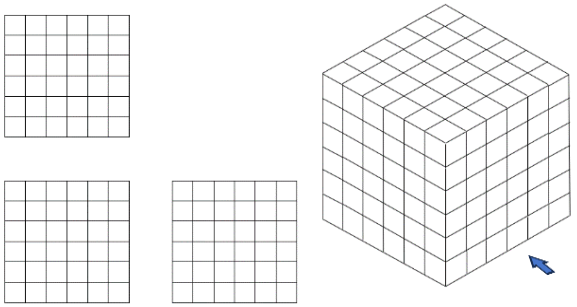
Q2 Describe the characteristics and an application of a 'spigot and recess'.
Redraw the orthogonal views and the pictorial view.



A Spigot

A Recess

Redraw



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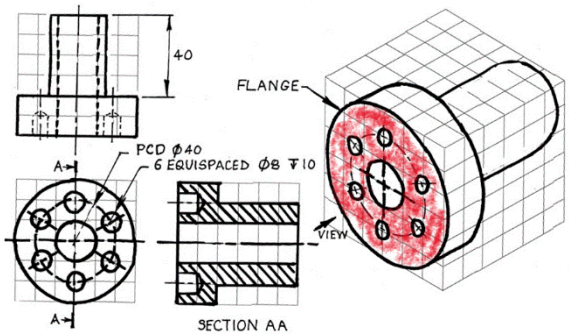
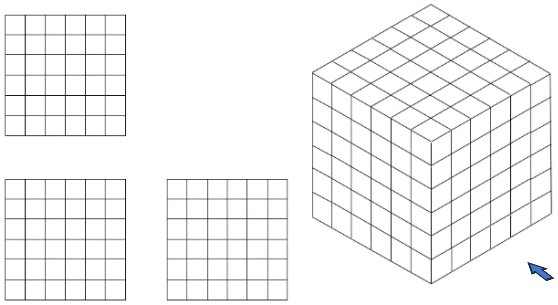


Redraw



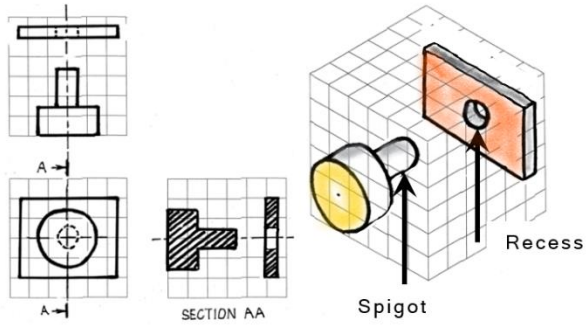
A Flange

There are many designs for flanges. The typical flange is used to join a shaft to another component.

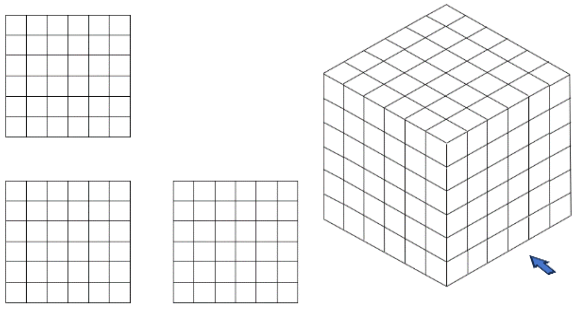
PCD

Bolt holes are drilled into a flange. The accurate position of the holes is described by the holes distance from the centre of the flange. The holes are spaced around a circle. The circle has a diameter, known as the PCD

Q2 Describe the characteristics and an application of a 'spigot and recess'.
Redraw the orthogonal views and the pictorial view.



Redraw



A Spigot is a pin to aid with component assembly. The spigot is used to locate a component part into a specific position. The spigot aligns with a recess (typically a recess hole).

A Recess is a hole to aid with component assembly. The recess is positioned to align with a spigot on another part. When the spigot aligns with the recess, the parts are in position for correct assembly.