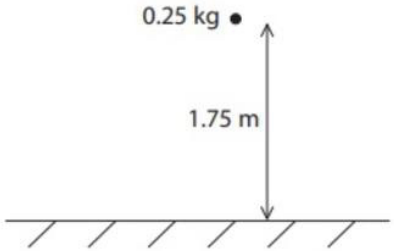
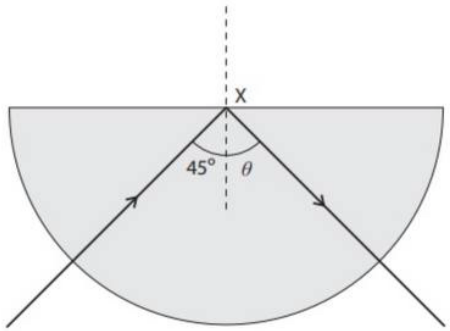
A ball has a mass of **0.25 Kg.** A student holds the ball at **1.75 m** above the ground.

a. State the equation linking the potential energy, mass and height.
b. Calculate the potential energy of the ball
c. The student let the ball fall. Calculate the K.E of the ball just before it hits the ground.
d. Another ball with the same mass has different K.E = 3.1 J. State the equation linking K.E, mass and Speed and calculate the speed of this ball.



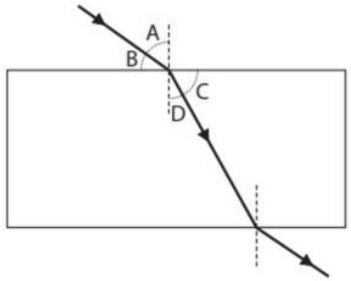
The following diagram shows a light ray passing through the semicircular glass slab.

a. State the name of the **dotted line "X'** shown on the surface.
b. When the light ray hits the surface as shown in the figure, all of it reflected back inside. **What is the name of this process?**
c. **What is the angle labelled Θ?**



A student plans to measures the refractive index of glass. He traces a ray light through the glass block as shown in the figure below.

a. Which letter represents the angle of refraction?
b. Explain how a student can use the glass block to find an accurate value for the refractive index of the glass block.



Identify the row that contains two scalars and one vector quantity.

A	distance	acceleration	velocity
B	speed	mass	acceleration
C	distance	weight	force
D	speed	weight	acceleration
E	velocity	force	mass

- ○ A.
- ○ C.
- ○ B.
- ○ D.