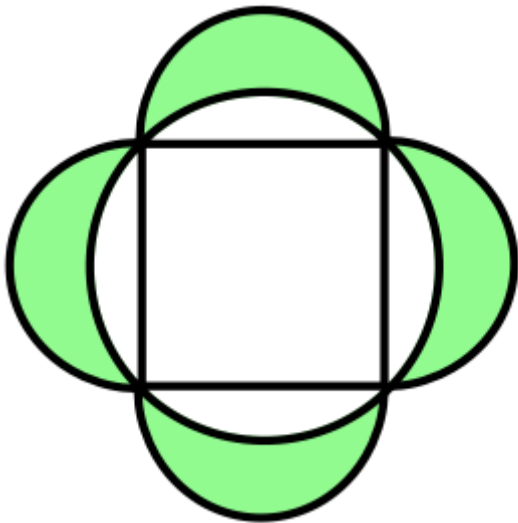


October 1st



$$\text{Area of each semi-circle} = \frac{1}{2} \pi \times 1^2 = \frac{1}{2} \pi$$

$$\text{Area of square} = 2 \times 2 = 4$$

$$\text{Diameter of circle} = \sqrt{2^2 + 2^2} = 2\sqrt{2}$$

$$\text{Hence radius of circle} = \sqrt{2}$$

$$\text{Area of circle} = \pi \times \sqrt{2}^2 = 2\pi$$

$$\text{Total area of the 4 segments (in the circle but outside the square)} = 2\pi - 4$$

$$\text{Shaded area} = \text{Area of 4 semi-circles} - \text{area of 4 segments} = 2\pi - (2\pi - 4)$$

$$= \mathbf{4\text{cm}^2}$$