

Question 1

Consider the point

$$x = 2$$

$$y = 2$$

$$z = 0$$

What are the angular coordinates for this point?

1. $\theta = 0, \phi = \frac{\pi}{2}$

2. $\theta = \frac{\pi}{2}, \phi = 0$

3. $\theta = \frac{\pi}{2}, \phi = \frac{\pi}{2}$

4. $\theta = \frac{\pi}{2}, \phi = \frac{\pi}{4}$

5. $\theta = \frac{\pi}{4}, \phi = \frac{\pi}{2}$

Question 2

Consider the point

$$x = 0$$

$$y = 2$$

$$z = 0$$

What are the angular coordinates for this point?

1. $\theta = 0, \phi = \frac{\pi}{2}$

2. $\theta = \frac{\pi}{2}, \phi = 0$

3. $\theta = \frac{\pi}{2}, \phi = \frac{\pi}{2}$

4. $\theta = \frac{\pi}{2}, \phi = \frac{\pi}{4}$

5. $\theta = \frac{\pi}{4}, \phi = \frac{\pi}{2}$

Question 3

Consider the point

$$x = 0$$

$$y = 2$$

$$z = 2$$

What are the angular coordinates for this point?

1. $\theta = 0, \phi = \frac{\pi}{2}$

2. $\theta = \frac{\pi}{4}, \phi = 0$

3. $\theta = \frac{\pi}{2}, \phi = 0$

4. $\theta = \frac{\pi}{4}, \phi = \frac{\pi}{2}$

5. $\theta = \frac{\pi}{4}, \phi = \frac{\pi}{4}$

6. $\theta = \frac{\pi}{2}, \phi = \frac{\pi}{4}$