

SPHERICAL GRAPHS

Identify by letter the graph that corresponds to each of the following functions.

$$\rho = \cos 2\varphi$$

1. $0 \leq \theta \leq 2\pi$ _____
 $0 \leq \varphi \leq \pi$

$$\rho = \varphi$$

2. $0 \leq \theta \leq 2\pi$ _____
 $0 \leq \varphi \leq \pi$

$$\rho = \cos 4\varphi \cdot \cos 4\theta$$

3. $0 \leq \theta \leq 2\pi$ _____
 $0 \leq \varphi \leq \pi$

$$\rho = \sin \varphi \cdot 1.3^\theta$$

4. $0 \leq \theta \leq 2\pi$ _____
 $0 \leq \varphi \leq \pi$

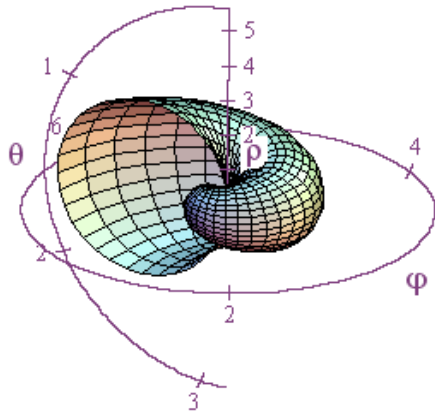
$$\rho = 3$$

5. $0 \leq \theta \leq 2\pi$ _____
 $0 \leq \varphi \leq \pi$

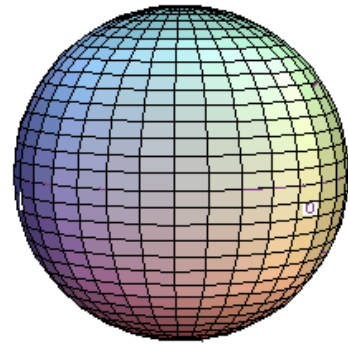
$$\rho = \cos 2\theta$$

6. $0 \leq \theta \leq 2\pi$ _____
 $0 \leq \varphi \leq \pi$

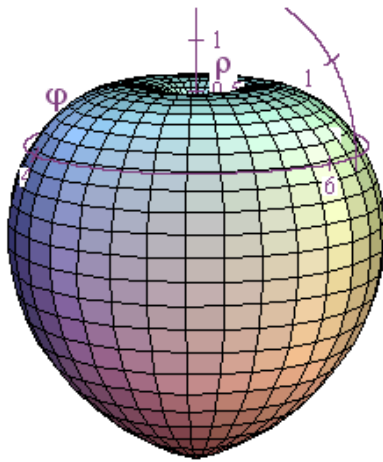
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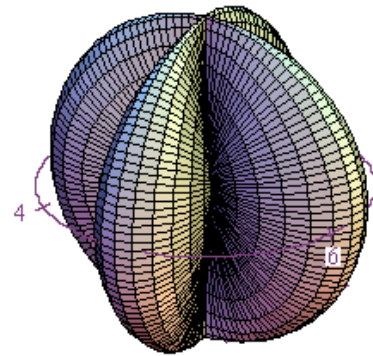
a.



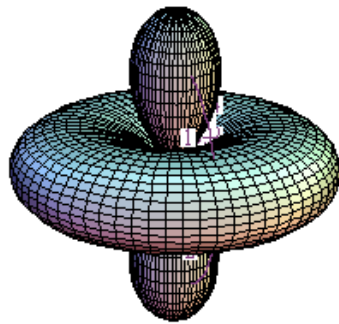
b.



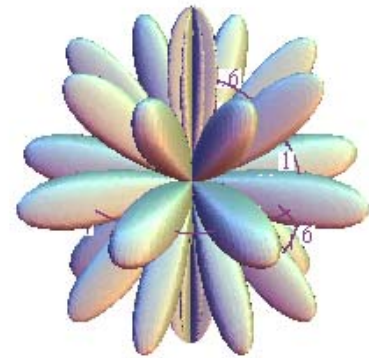
c.



d.



e.



f.