## **Ranking Theta vs. Time Graph**

A graph of an angular position vs. time graph is located below, as well as a chart that describes six scenarios and the corresponding angular positions at different times. On the graph, plot each scenario and then answer the following questions. (Each unit represents 1 second and 10°)

t = 2 s	t = 4 s	t = 6 s	t = 8 s
10°	20°	30°	40°
50°	50°	50°	50°
5°	10°	15°	20°
-10°	-20°	-30°	-40°
-15°	-30°	-45°	-60°
-60°	-60°	-60°	-60°
	t = 2 s 10° 50° -10° -15° -60°	$t = 2 s$ $t = 4 s$ $10^{\circ}$ $20^{\circ}$ $50^{\circ}$ $50^{\circ}$ $5^{\circ}$ $10^{\circ}$ $-10^{\circ}$ $-20^{\circ}$ $-15^{\circ}$ $-30^{\circ}$ $-60^{\circ}$ $-60^{\circ}$	$t = 2 s$ $t = 4 s$ $t = 6 s$ $10^{\circ}$ $20^{\circ}$ $30^{\circ}$ $50^{\circ}$ $50^{\circ}$ $50^{\circ}$ $5^{\circ}$ $10^{\circ}$ $15^{\circ}$ $-10^{\circ}$ $-20^{\circ}$ $-30^{\circ}$ $-15^{\circ}$ $-30^{\circ}$ $-45^{\circ}$ $-60^{\circ}$ $-60^{\circ}$ $-60^{\circ}$



A. Rank each scenario based on its average angular velocity. Rank positive angular velocites as greater than negative angular velocities.

Largest 1. \_\_\_\_\_2. \_\_\_\_3. \_\_\_\_4. \_\_\_\_5. \_\_\_\_6. \_\_\_\_Smallest

Justify your ranking:

B. Rank each scenario based on its average angular acceleration. Rank positive angular accelerations as greater than negative angular accelerations.

Largest 1. \_\_\_\_\_ 2. \_\_\_\_ 3. \_\_\_\_ 4. \_\_\_\_ 5. \_\_\_\_ 6. \_\_\_\_ Smallest

Justify your ranking: