

**Time: 4 minutes: Closed book, notes, calculator.**

Identify each curve by writing the **best** capital letter (A)–(J) in the blank.  
A capital letter may be used more than once or not at all.

A: circle

F: line

B: semi-circle

G: line segment

C: quarter-circle

H: parabola

D: ellipse

I: spiral

E: semi-ellipse

J: helix

\_\_\_\_\_  $\mathbf{r}(t) = \langle \cos(t), \sin(t) \rangle$

\_\_\_\_\_  $\mathbf{r}(t) = \langle t \cos(t), t \sin(t) \rangle$

\_\_\_\_\_  $\mathbf{r}(t) = \langle \cos^2(t), \sin^2(t) \rangle \quad (0 \leq t \leq \pi/2)$

\_\_\_\_\_  $\mathbf{r}(t) = \langle 3 \cos(2t), 4 \sin(2t) \rangle \quad (0 \leq t \leq \pi/2)$

\_\_\_\_\_  $\mathbf{r}(t) = \langle t, \cos(2t), \sin(2t) \rangle$