Sketch

1. Carlos walked from his school to his home, first walking 0.6 miles due west and then 0.8 miles due south. What is the straight-line distance, in miles, from Carlos's house to his school?
   A. 0.2
   B. 0.4
   C. 0.6
   D. 0.8
   E. 1.0

2. Each side of a square is 3 cm long. One vertex of the square is at $(-3, 3)$ on a square coordinate grid marked in centimeter units. Which of the following points on the grid could be another vertex of the square?
   A. $(0, 3)$
   B. $(-4, 4)$
   C. $(1, 5)$
   D. $(-1, -1)$
   E. $(1, -2)$

3. Given that $\angle C$ is the included angle between the 2 congruent sides of the isosceles triangle ΔCDE, and the measure of $\angle C$ is $40°$, what is the measure of $\angle E$?
   A. $20°$
   B. $40°$
   C. $70°$
   D. $100°$
   E. $140°$

4. Every graph in one of the following categories has a horizontal line of symmetry regardless of how it is oriented in the standard (x, y) coordinate plane. Which one?
   A. Ellipses
   B. Trapezoids
   C. Circles
   D. Triangles
   E. Rectangles

5. A city planner is using a map to lay out a detour for the eastbound lane of a section of highway that, on the map, is a straight line going east and west. On the map, the detour goes 3 miles straight south, 2 miles straight east, 4 miles straight south, 5 miles straight east, 6 miles straight north, 1 mile straight west, and finally 1 mile straight north, back to the highway. According to the map, how many more miles will an eastbound driver travel by taking the detour than he would if he could stay on the highway?

   A. 22
   B. 16
   C. 15
   D. 14
   E. 6

6. Consider sets $L, M, N, and\ O$ such that M is a subset of L, N is a subset of M, and O is a subset of N. Whenever y is an element of N, y *must* be an element of:

   A. L
   B. O
   C. L and M
   D. M and O
   E. $L, M,$ and O

7. The equation $(x + 3)^2 + (y - 7)^2 = 10$ is that of a circle that lies in the standard (x, y) coordinate plane. One endpoint of a diameter of the circle has y-coordinate 10. What is the y-coordinate of the other endpoint of that diameter?

   A. 1
   B. 3
   C. 4
   D. 5
   E. 7

8. Ray RT bisects $\angle QRS$, the measure of $\angle QRS$ is $12x$, and the measure of $\angle QRT$ is $(3x + 30)°$. What is the measure of $\angle TRS$?

   A. $10°$
   B. $33\frac{1}{3}°$
   C. $40°$
   D. $60°$
   E. $120°$

9. What is the maximum value of $f(x) = -(x - h)^2 + k - j$ for each set of positive real numbers, $h, k,$ and j ?

A. $-j$

B. $-k$

C. k

D. $-k - j$

E. $k - j$

10. Suppose the equations $(x + 5)^2 + (y - 2)^2 = 9$ and $\frac{(x+5)^2}{9} + \frac{(y+6)^2}{25} = 1$ are graphed in the same standard (x, y) coordinate plane. How many points of intersection do these graphs share?

A. 0

B. 1

C. 2

D. 3

E. 4