Scaffolded Practice 5.1.2

Example 1

Given the point P (5, 3) and $T(x, y) = (x + 2, y + 2)$, what are the coordinates of $T(P)$?

1. Identify the point given.

2. Identify the transformation.

3. Calculate the new coordinate.

continued

Example 2

Given $\triangle ABC: A(5,2), B(3,5)$, and $C(2,2)$, and the transformation $T(x, y) = (x, -y)$, what are the coordinates of the vertices of $T(\triangle ABC)$? What kind of transformation is T?

Example 3

Given the transformation of a translation $T_{5,-3}$, and the points $P(-2, 1)$ and $Q(4, 1)$, show that the transformation of a translation is isometric by calculating the distances, or lengths, of $\overline{PQ}$ and $\overline{P'Q'}$.

Example 4

Given $T_{-6,2}(x, y) = (x - 6, y + 2)$, state the translation that would yield the identity transformation, $I = T_{h,k}(T_{-6,2}(x, y))$.