

Real-Life Career Activity

Animator

Although today's animators are generally skilled at drawing by hand, most animators draw using computer software. They must not only be good artists, but must also know how to use computer graphics and animation software. As computer software improves, animators must master it to help them create better animation sequences efficiently.

Suppose an animator draws a van parked by a lake. The corners of the van are at coordinates $(1, 1)$, $(5, 1)$, $(1, 12)$, and $(5, 12)$. The animator wants to show the van reflected in the water of the lake. To find the coordinates of the reflection, the animator multiplies each y -coordinate by -1 .

$(1, 1)$, $(5, 1)$, $(1, 12)$, and $(5, 12)$, reflected over the x -axis are $(1, -1)$, $(5, -1)$, $(1, -12)$, and $(5, -12)$.

The coordinates of the van's reflection are $(1, -1)$, $(5, -1)$, $(1, -12)$, and $(5, -12)$.



Solve.

1. The van moves so that its corners are at coordinates $(-2, 1)$, $(2, 1)$, $(-2, 12)$, and $(2, 12)$. Calculate the coordinates of the van's reflection in the lake.
2. The van moves so that its corners are at $(-2, 7)$, $(2, 7)$, $(-2, 18)$, and $(2, 18)$. Calculate the coordinates of the van's reflection in the lake.
3. The corners of a park bench are at $(8, 7)$, $(12, 7)$, $(8, 18)$, and $(12, 18)$. Identify which of the following coordinates cannot be a coordinate of the bench's reflection in the lake: $(8, -7)$, $(-12, 7)$, $(8, -18)$, and $(12, -18)$.