**Ironman Translations - Answers**

Ironman has to fly from his base to capture each of these villains. Once a villain is captured he has to fly back to his base to secure them in a holding cell.



Write the vectors that Ironman has to fly to capture each villain:

Radioactive Man: $\left(\genfrac{}{}{0pt}{}{7}{4}\right)$

Black Knight: $\left(\genfrac{}{}{0pt}{}{9}{-4}\right)$

Beetle: $\left(\genfrac{}{}{0pt}{}{-7}{-8}\right)$

Whiplash: $\left(\genfrac{}{}{0pt}{}{4}{-6}\right)$

Doctor Doom: $\left(\genfrac{}{}{0pt}{}{-6}{0}\right)$

**The Ani-Men Attack!**

The Ani-Men, led by Count Nefaria, have let off an explosive device that has knocked Ironman’s co-ordinate grid out of sync. The system thinks that Ironman is now based at (4,8).



Write the vectors that Ironman has to fly to capture each villain:

Ape Man: $\left(\genfrac{}{}{0pt}{}{-12}{-3}\right)$

Birdman: $\left(\genfrac{}{}{0pt}{}{-6}{-9}\right)$

Frog Man: $ \left(\genfrac{}{}{0pt}{}{-4}{-15}\right)$

Dragonfly: $\left(\genfrac{}{}{0pt}{}{1}{-7}\right)$

Cat Man: $\left(\genfrac{}{}{0pt}{}{4}{-10}\right)$

Count Nefaria: $\left(\genfrac{}{}{0pt}{}{-10}{-15}\right)$

*Extension: Can you calculate the exact distance to each villain so that Ironman can capture them in order from closest first?*