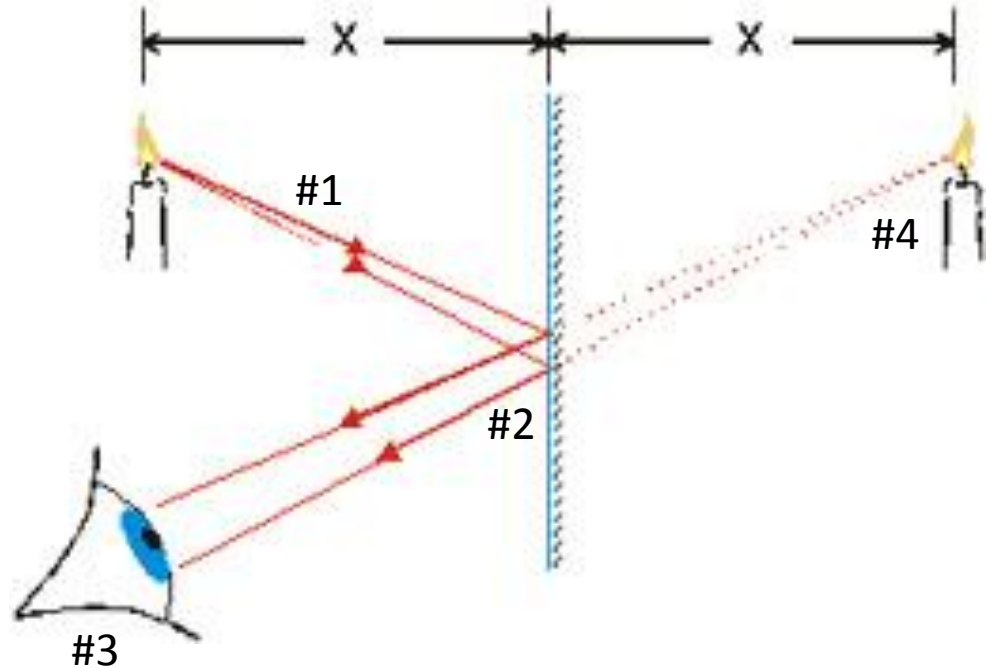


# Flat Mirror Diagrams

# Overall Information

In this diagram you can see how an image is formed.

1. Light leaves the object and hits the mirror
2. It reflects off of the mirror
3. Our eye catches the rays and try to figure out where it comes from
4. Our brain creates an image where the reflected rays intersect.

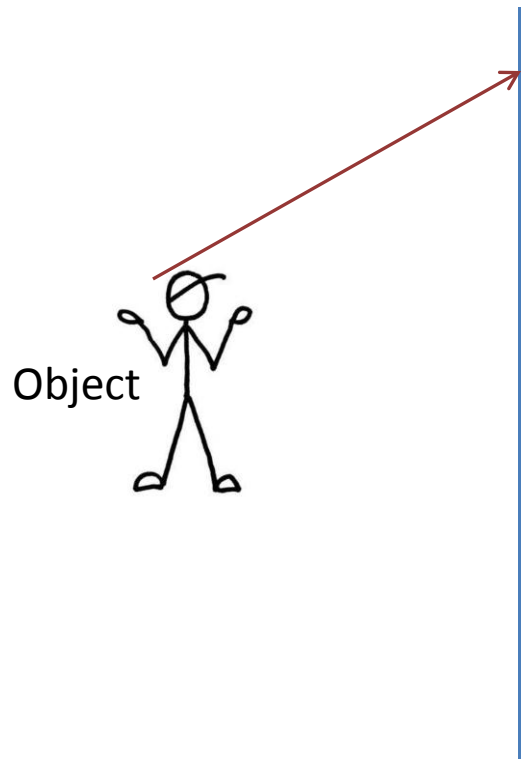


# Drawing Ray Diagrams

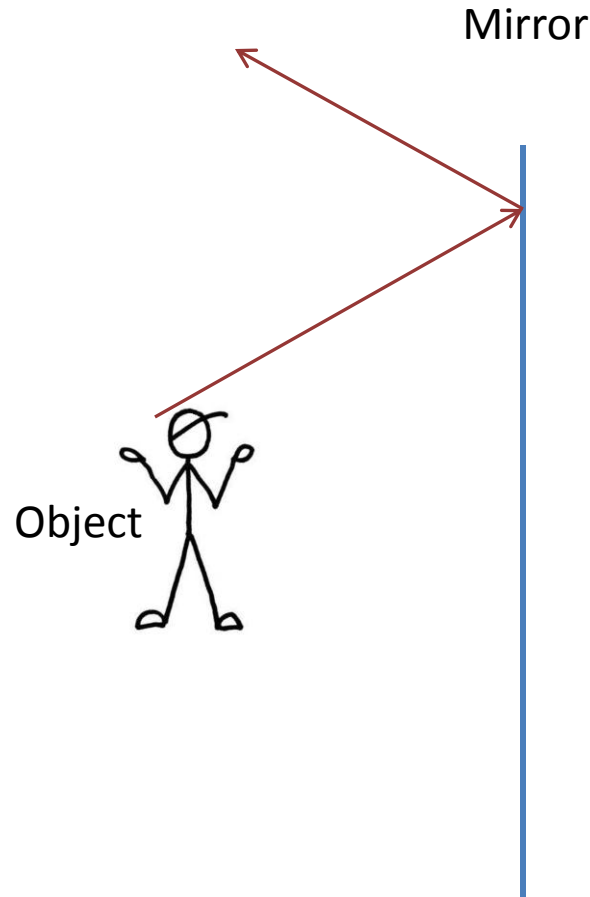
- For our ray diagrams you will need to determine the location of the top of the object and the location of the bottom of the object. Use the following steps to do that.

# Step 1: Draw an incident ray from the top of the object

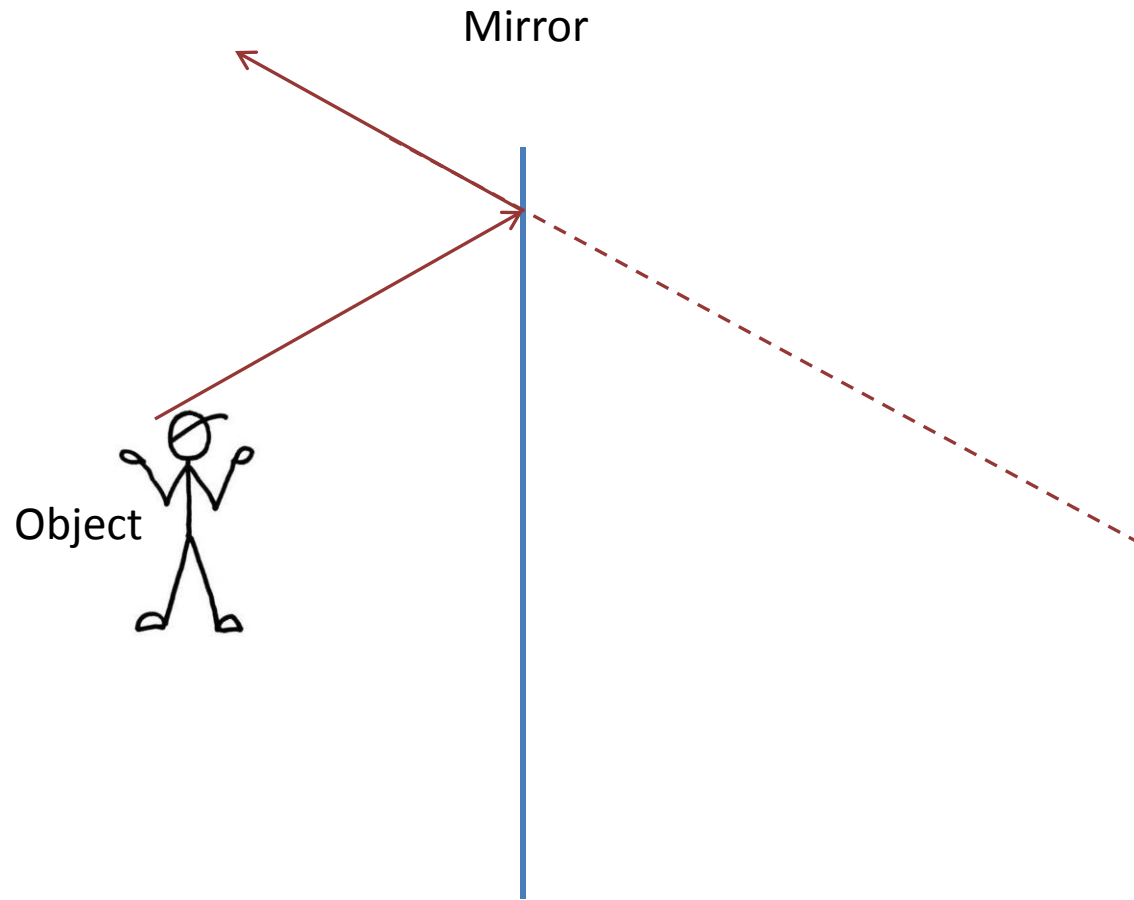
Mirror



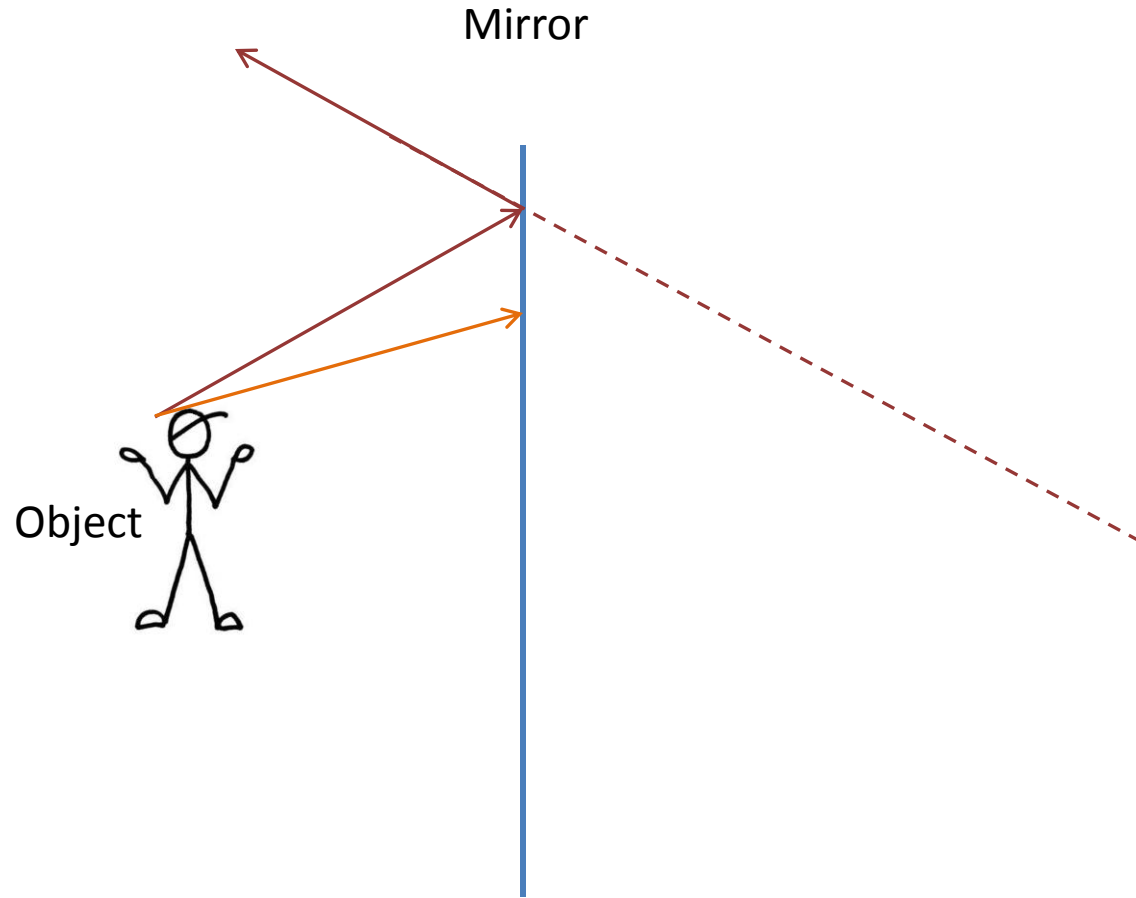
Step 2: Reflect the ray at an angle that equals the angle at which the incident ray hit



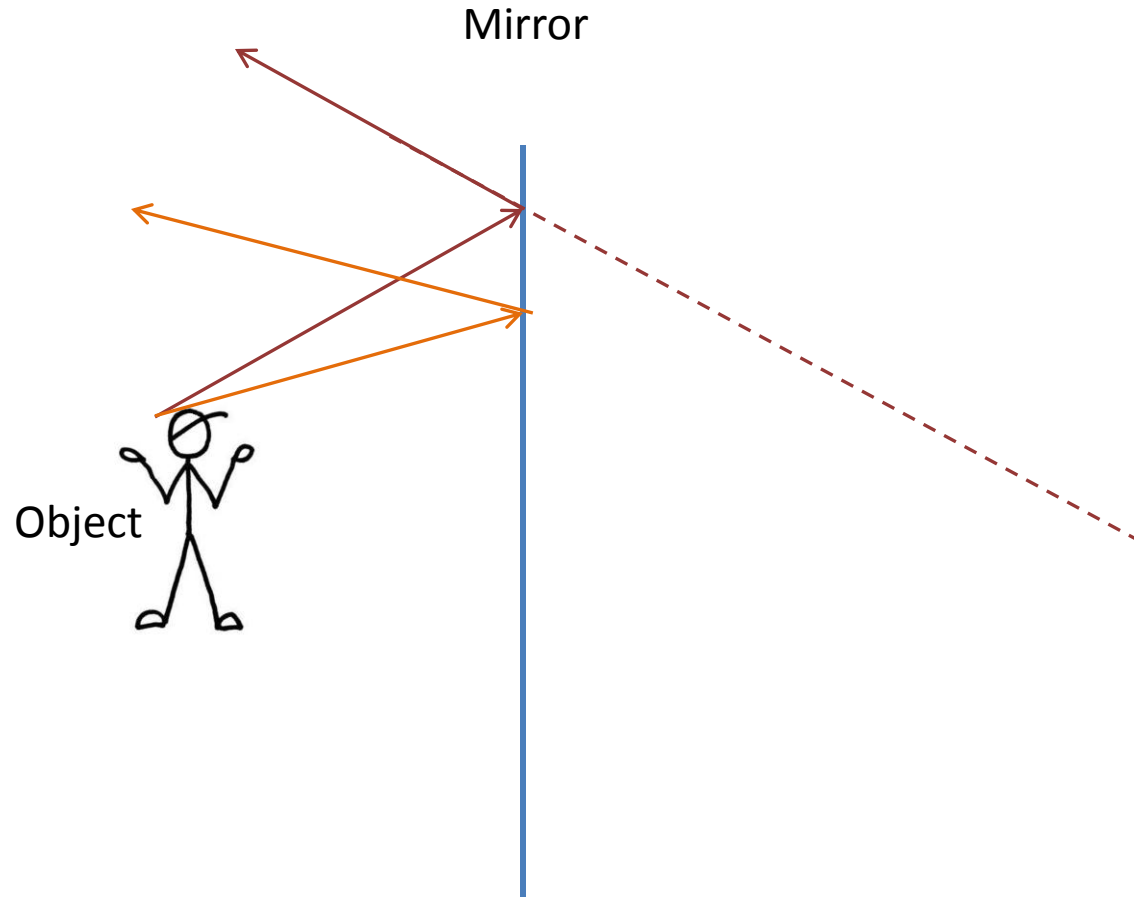
# Step 3: Trace the reflected ray behind the mirror



Step 4: Draw a second ray from the top of the object to the mirror

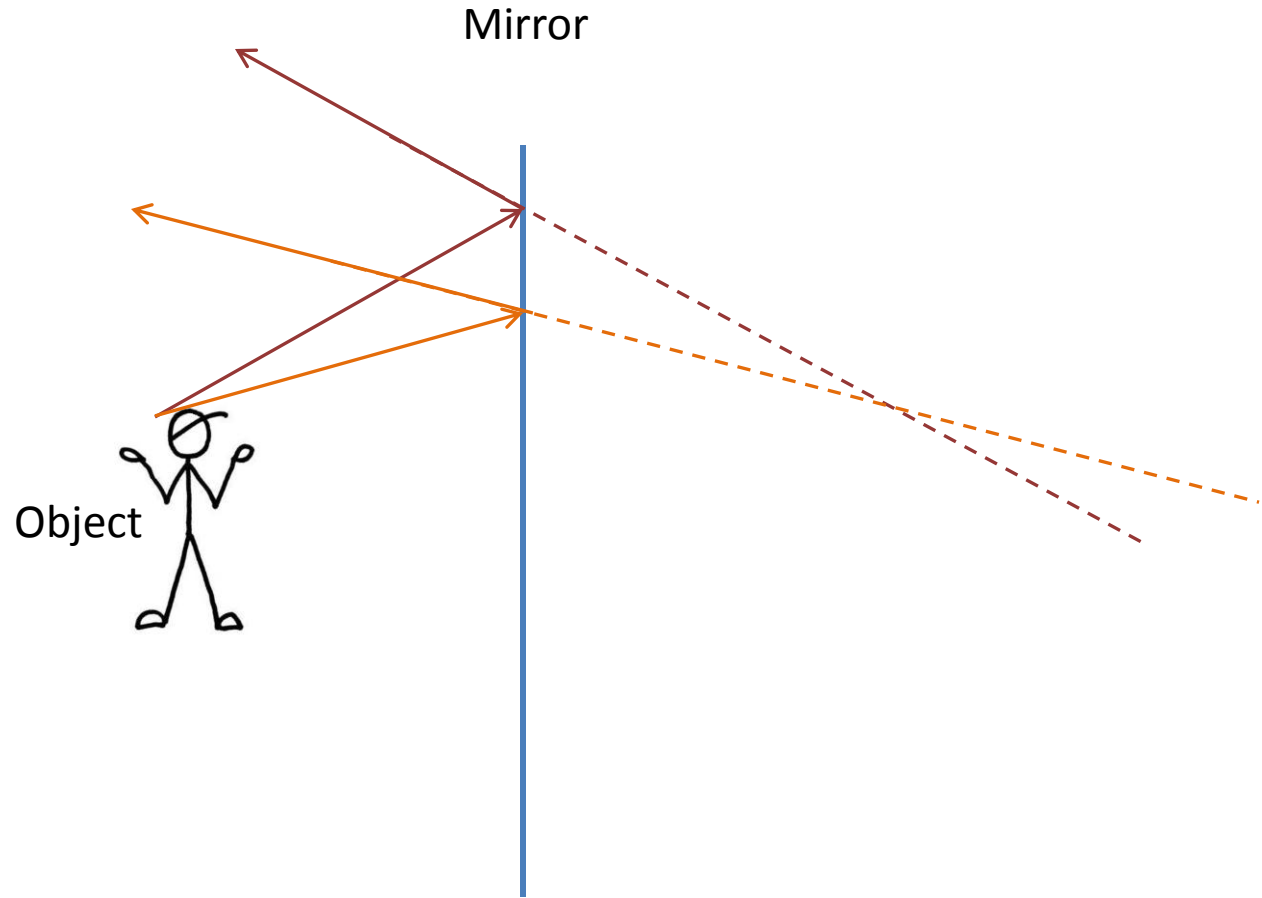


Step 5: Reflect the ray at an angle equal to the angle the incident ray hit the mirror

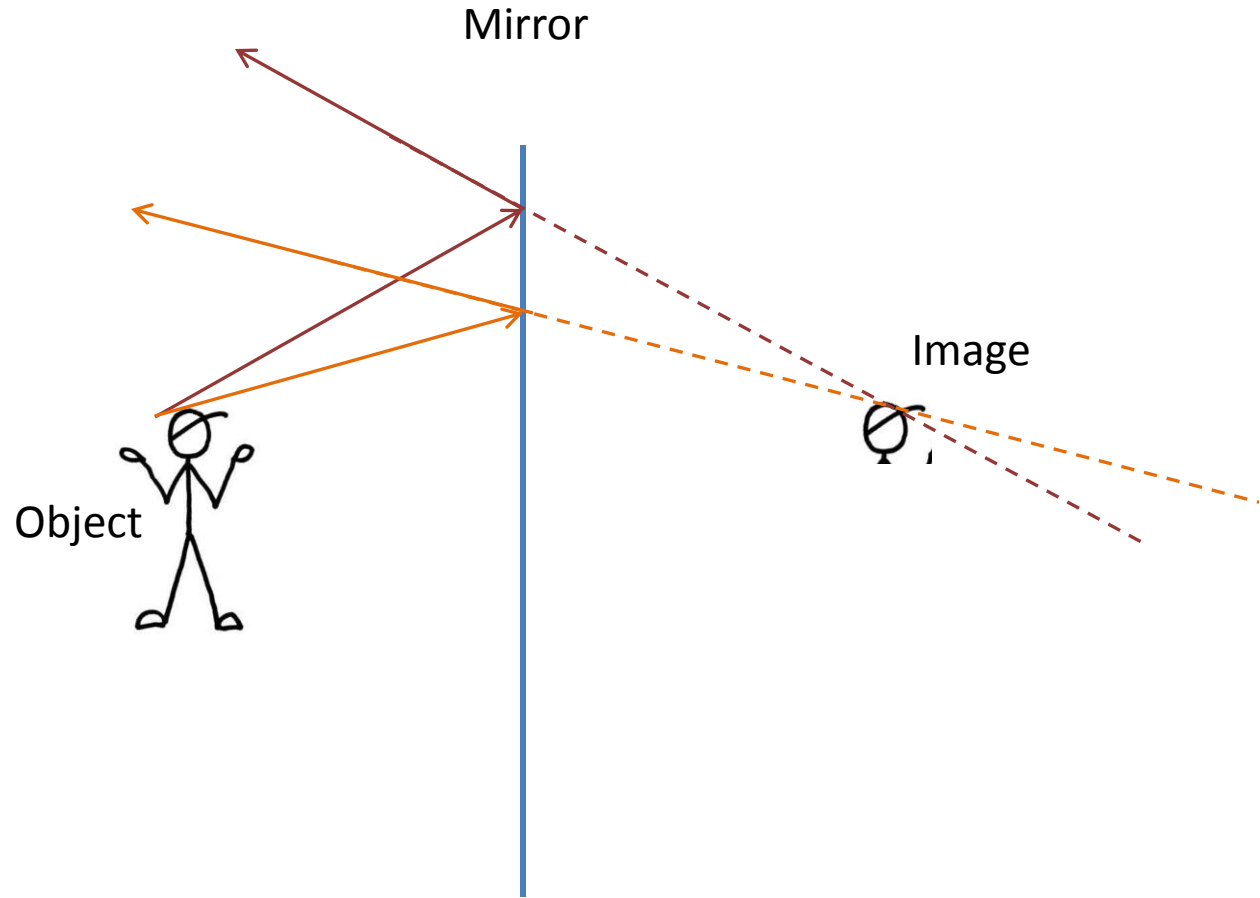




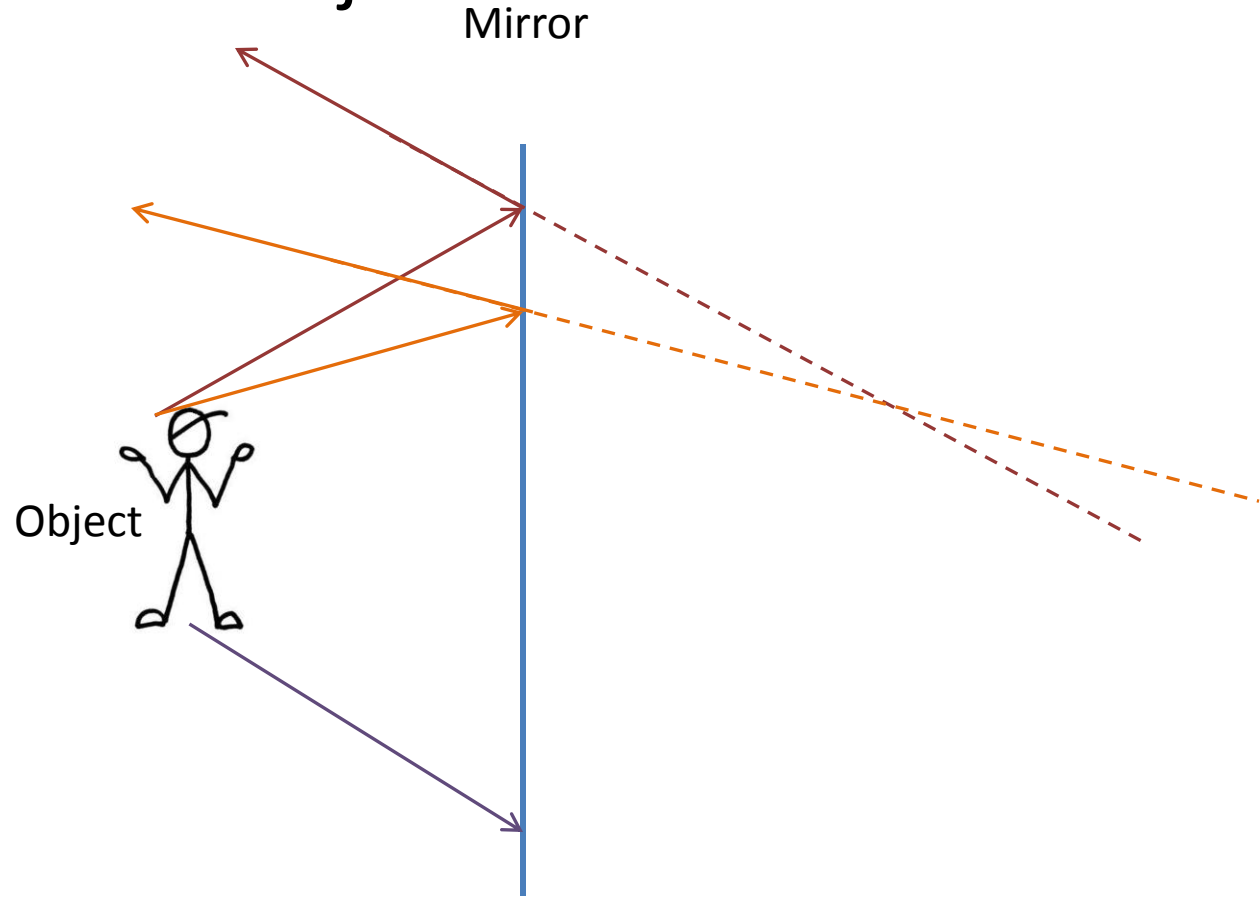
# Step 6: Trace the reflect ray back behind the mirror



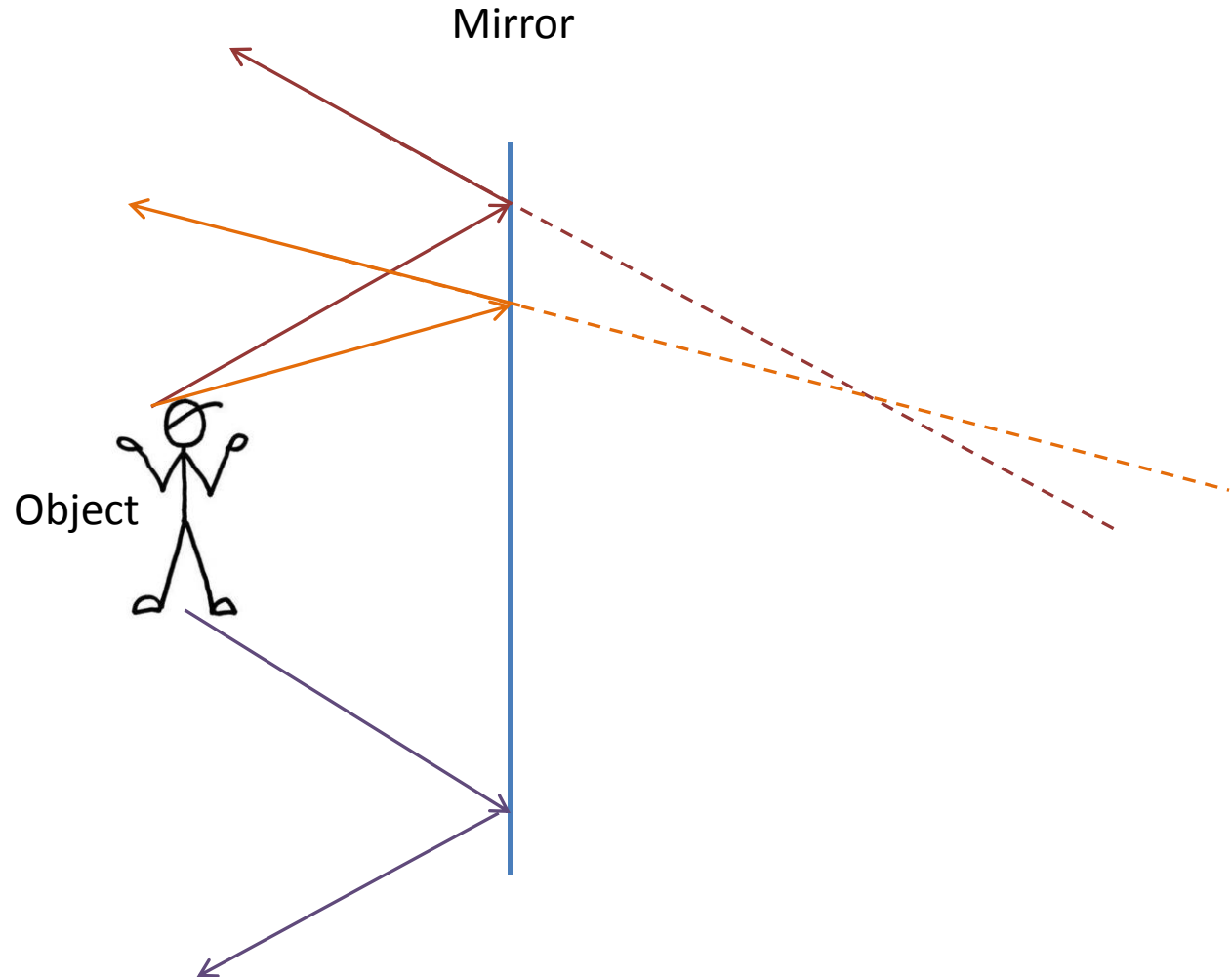
Step 7: The point where these two reflected rays intersect is the top of the image



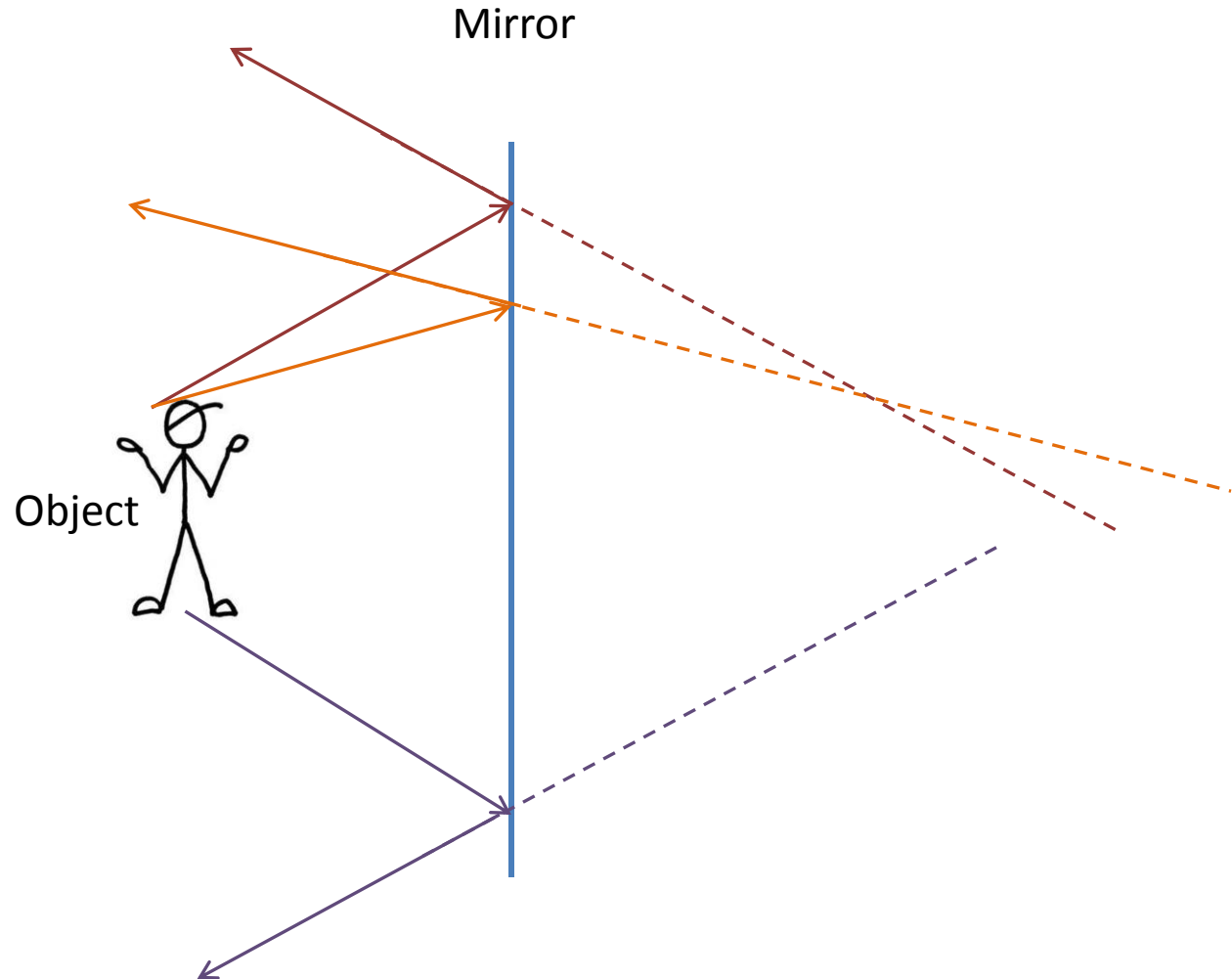
Step 8: Now focus on finding the bottom of the image – Draw an ray of light from the bottom of the object to the mirror



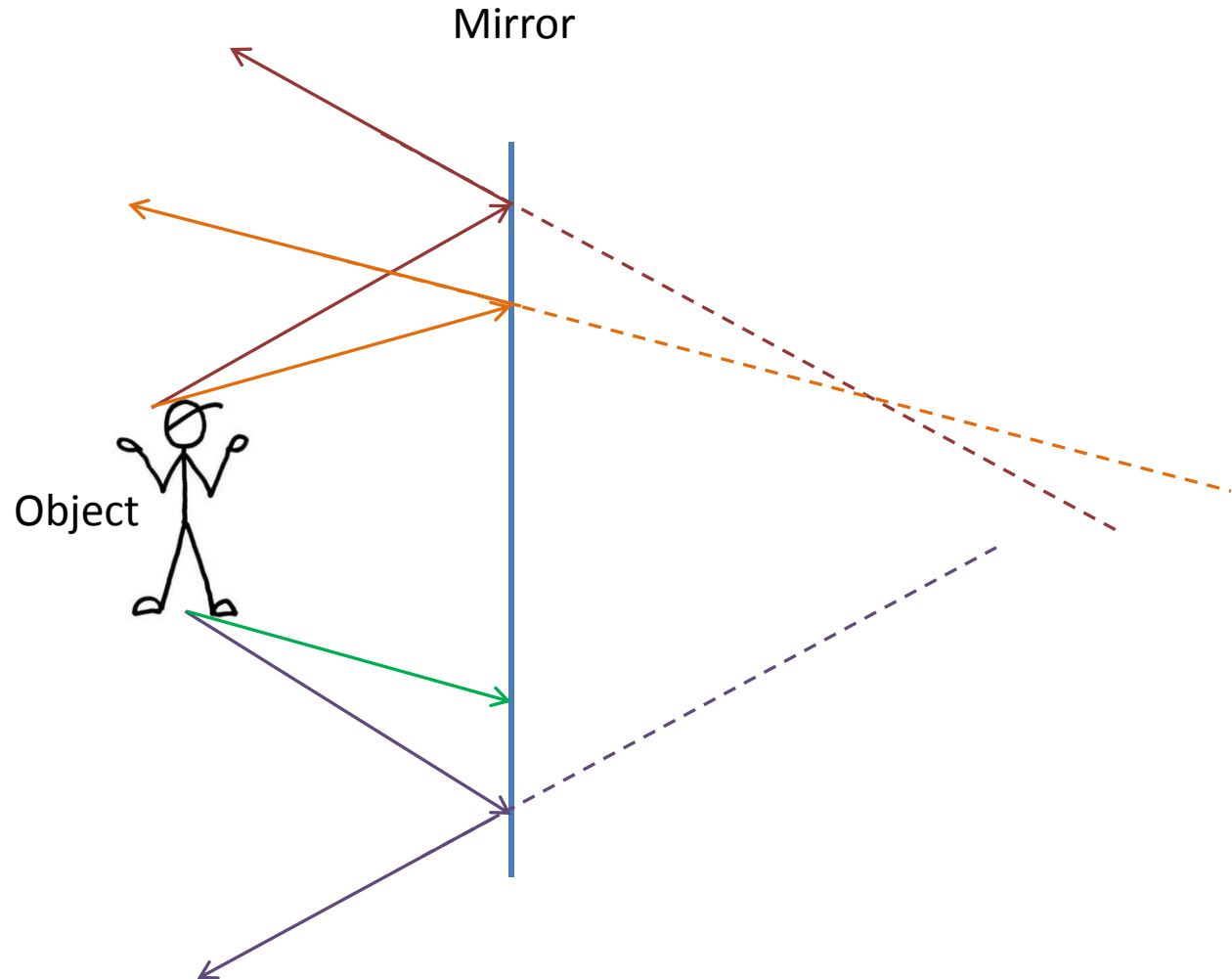
# Step 9: Reflect the ray as you have been doing



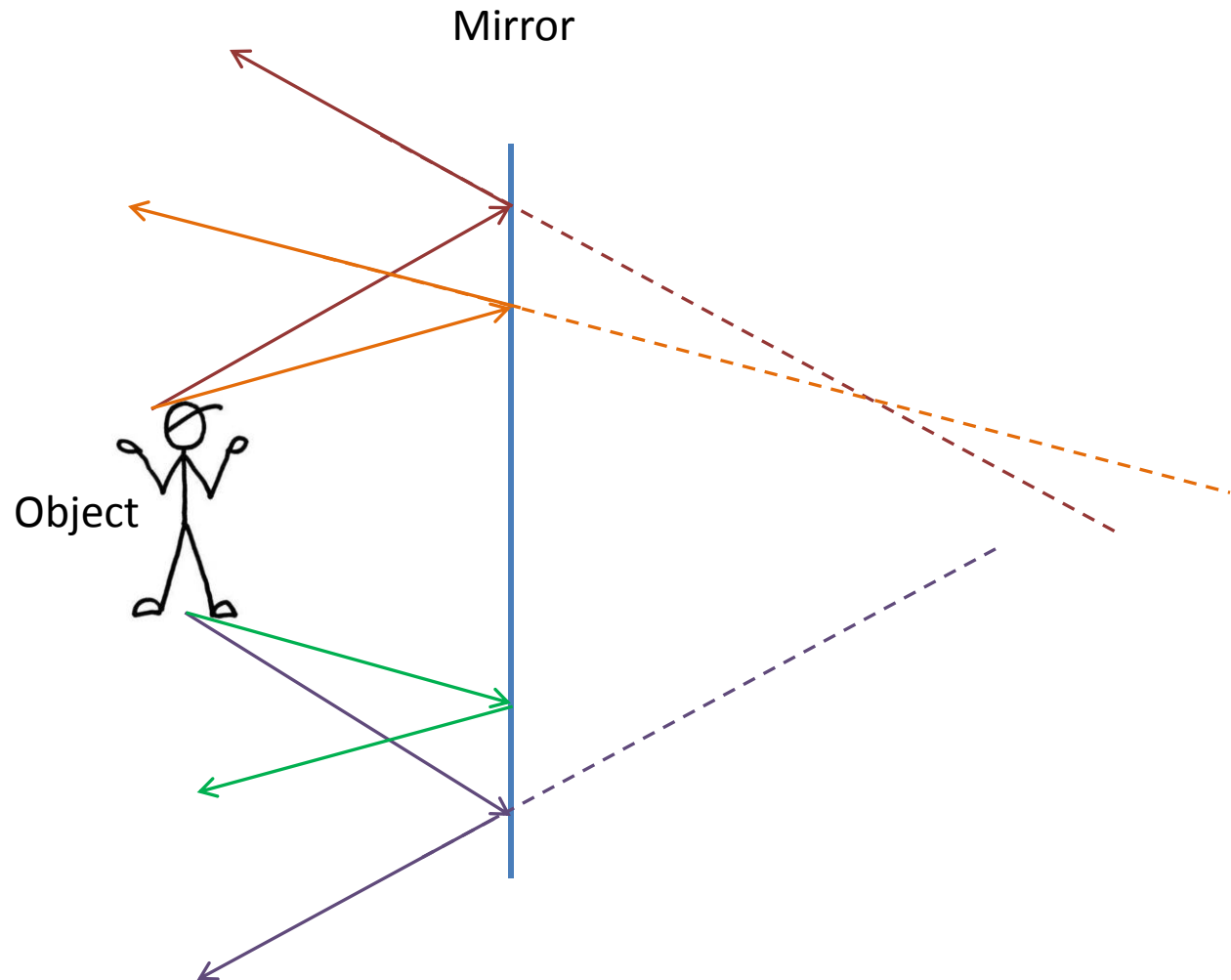
# Step 10: Trace the reflected ray behind the mirror



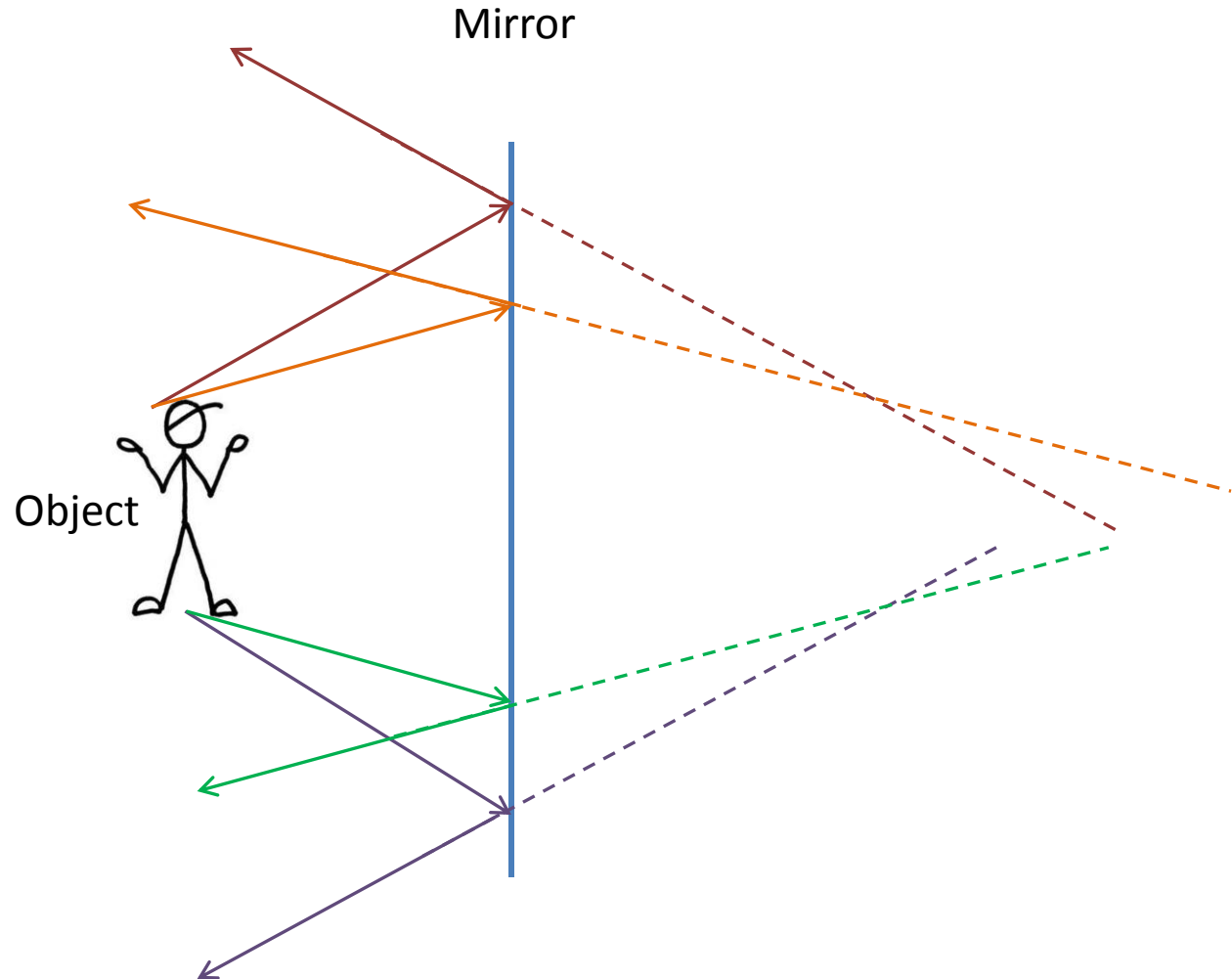
# Step 11: Draw a second ray from the bottom of the object



Step 12: Reflect this ray as you have been doing per the law of reflection

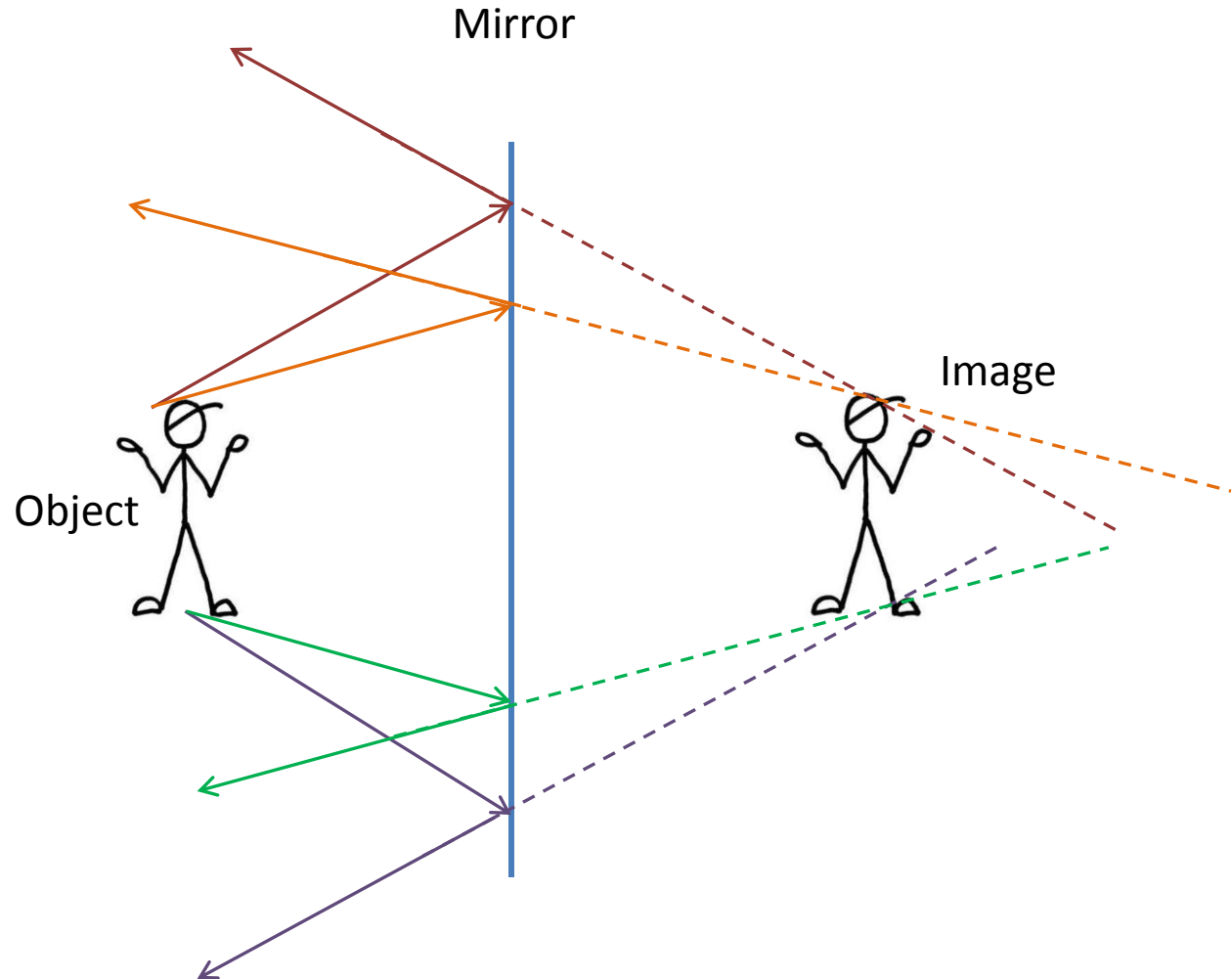


# Step 13: Trace the reflected ray behind the mirror





Step 14: The point where these two rays (purple and green) intersect is the bottom of the image



# Notes

- The image is behind the mirror
- The image is the same size as the object
- The distance of the image to the mirror is the same as the distance of the object to the mirror