1. What is an exoplanet (or extrasolar planet)?

2. List and describe in your own words TWO of the four methods that astronomers use to find exoplanets. Do not copy the text word-for-word.

   Method 1:
   Description:

   Method 2:
   Description:

3. Look through some of the exoplanets on the “extrasolar planet finder.” What is the method that was used to locate the majority of the exoplanets?
To answer the questions below go to: [http://exoplanet.eu/catalog.php](http://exoplanet.eu/catalog.php)

**Important note:** All planetary masses are listed by default in terms of Jupiter mass ($M_{\text{Jup}} = 2.5$ means a mass two and one half times greater than the mass of the planet Jupiter) and distances are listed in astronomical units (AU).

1. How many exoplanets have been discovered so far?

2. Of all the exoplanets listed, give the name of the planet that orbits the farthest from its central star and how far away the planet is from its star.

3. How does this most distant exoplanet listed compare in size to Jupiter and its distance from its central star? (Jupiter is 5.2 AU from the Sun)

4. Of the exoplanets listed, list 3 (name & mass) that are most like that mass of the Earth (0.003 $M_{\text{Jup}}$).

5. Do any of the planets shown orbit closer than Mercury at 0.3 AU?

6. Switch the units for Mass ($M_{\text{Jup}}$) and Radius ($R_{\text{Jup}}$) to Earth units ($M_{\text{Earth}}$ and $R_{\text{Earth}}$). Do any of the known exoplanets have a mass and radius comparable to Earth? If none are exactly the same, which is closest? What values does it have?