

# Astronomy Ranking Task: Gravity

## Exercise #6

**Description:** The table below shows the masses and distances (expressed in arbitrary units) between four different pairs of stars (Cases A – D).

Case	<i>Mass of star #1</i>	Distance between star #1 and star #2	<i>Mass of star #2</i>
<b>A</b>	4	2	2
<b>B</b>	2	2	8
<b>C</b>	8	4	4
<b>D</b>	1	3	5

**Ranking Instructions:** Rank (from greatest to least) the strength of the gravitational force exerted between the pairs of stars in cases A - D.

**Ranking Order:** Greatest 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ Least

Or, the strength of the gravitational force exerted between each pair of stars is the same.  
\_\_\_\_\_ (indicate with a check mark)

**Carefully explain** your reasoning for ranking this way:

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