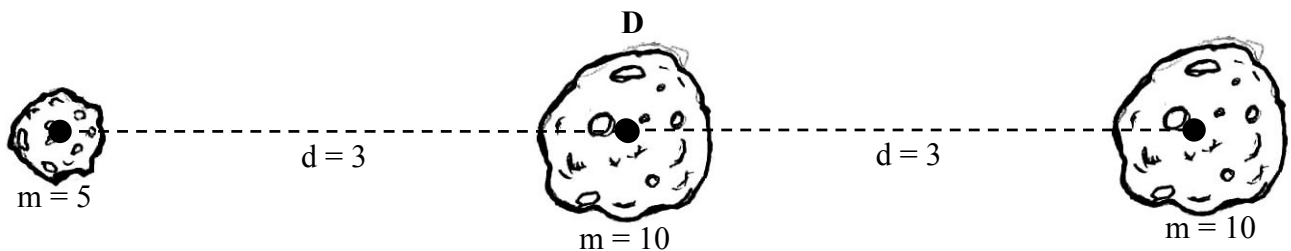
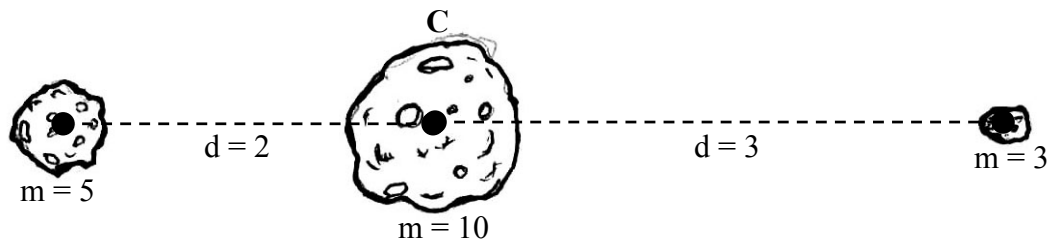
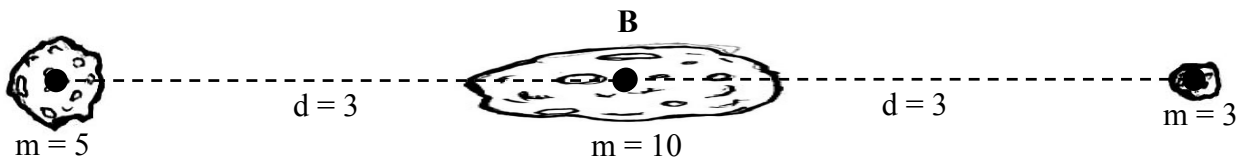
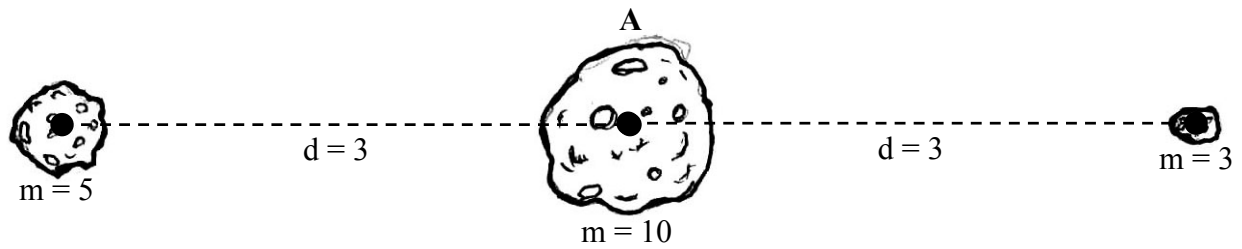


# Astronomy Ranking Task: Gravity

## Exercise #5

**Description:** The figures below (A – D) each show a large central asteroid along with two other asteroids located to the right and left of the central asteroid. The masses ( $m$ ) of the asteroids are expressed in arbitrary units, and the distance ( $d$ ) from the center asteroid is also expressed in arbitrary units.



**Ranking Instructions:** Rank (from greatest to least) the strength of the net (or total) gravitational force exerted on the center asteroid by its two neighboring asteroids.

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

Or, gravitational forces are all the same strength. \_\_\_\_\_ (indicate with a check mark)

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

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