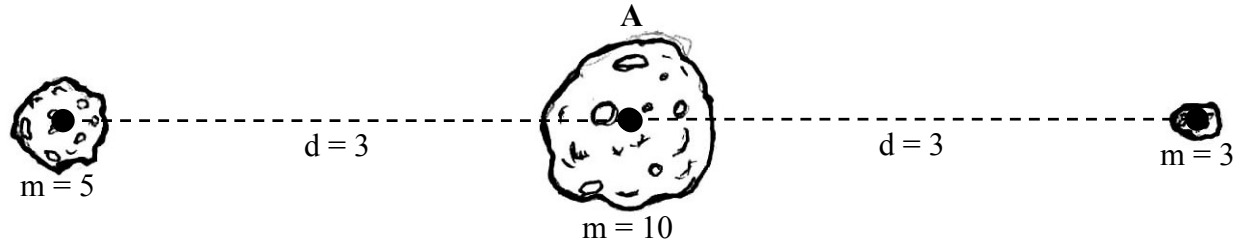
Astronomy Ranking Task:
Gravity

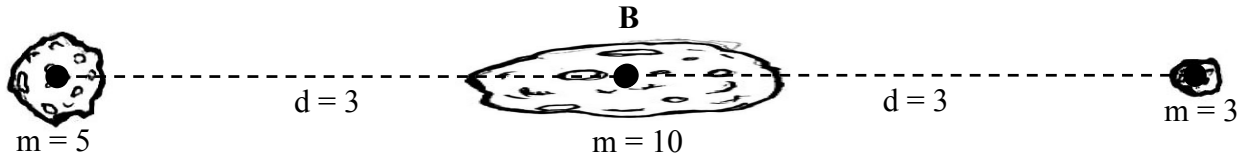
Exercise #5

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.

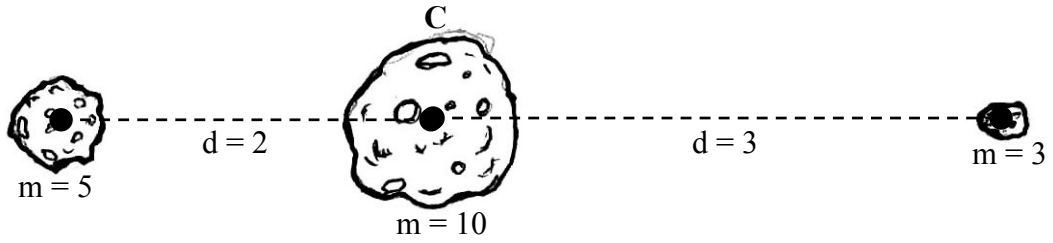
A



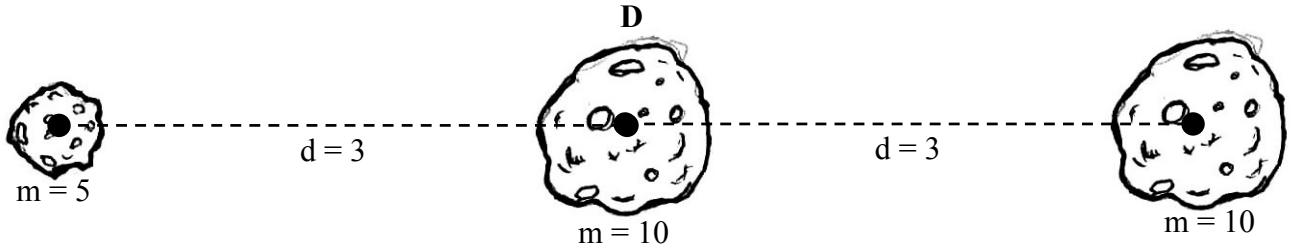
B



C



D



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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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