**Noteguide for Universal Gravitation: (Videos 5E) Name**



G = 6.67x10-11 Nm2/kg2

Example 1 - Find the force of gravity between a 0.756 kg stapler, and a 0.341 kg marker that is 1.75 m away?

Example 2 - What is the force of gravity between a 1.0 kg mass, and the earth?

(r = 6.38 x 106 m, mearth = 5.97 x 1024 kg)

Whiteboards:

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| 1. What is the force of gravity between a 5.2 kg shot and a 250. kg wrecking ball whose centers are 2.45 m distant? (1.44 x 10-8 N) | 2. Another shot is 1.45 m from the center of a 250. kg wrecking ball and experiences a force of 1.55 x 10-7 N, what is the mass of the shot? (19.5 kg) |
| 3. What distance from the center of a 512 kg wrecking ball must a 4.5 kg bowling ball be to experience a force of 1.13 x 10-9 N? (11.7 m ) | 4. The moon has a mass of 7.36 x 1022 kg, and a radius of 1.74 x 106 m. What does a 34.2 kg mass weigh on the surface? (55.5 N) |