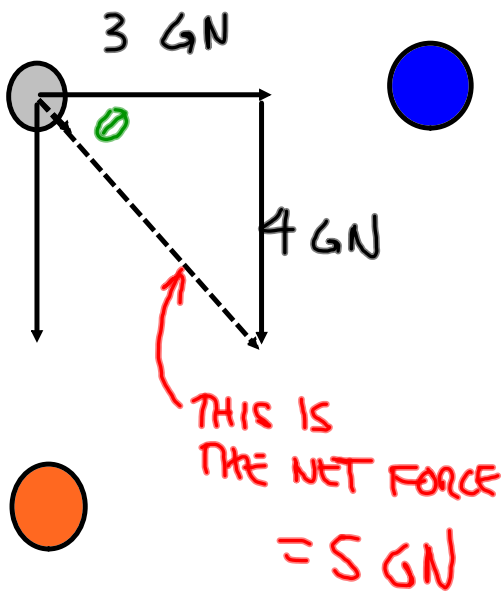


SOL 12.01.08

Giga = 10^9



$$F = \frac{G m_1 m_2}{d^2}$$

NEWTON'S LAW OF
UNIVERSAL
GRAVITATION

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$$\tan \theta = \frac{4}{3}$$

$$\theta = \tan^{-1} \frac{4}{3}$$

$$\theta = 53.1^\circ$$

NET FORCE = 5 GN

@ $\theta = 53.1^\circ$ as per
SKETCH.



TOA

$$\tan \theta = \frac{4}{3} = 1.3\bar{3}$$

$$\theta = 53^\circ$$

THE NET FORCE = 5 GN @ 53° as per sketch



$$\Delta t = 0.0606 \text{ s}$$

$$v = \frac{\Delta d}{\Delta t} = \frac{5 \text{ cm}}{0.0606 \text{ s}} = 82.51 \frac{\text{cm}}{\text{s}}$$

