

MSC 1012 questions for Chapter 3 set 6

Momentum

NAME \_\_\_\_\_

- 1) A 3000 kg airplane has a velocity of  $600 \text{ km hr}^{-1}$ . What is its momentum?

ANS: \_\_\_\_\_

- 2) Two objects are held near each other with a compression spring between them. They are then released and the spring pushed them apart. The heavier object has a mass of 10.0 kg and moves at a velocity of  $4.50 \text{ m s}^{-1}$  from its starting point. The lighter object's velocity is measured as  $10.0 \text{ m s}^{-1}$ . What is the mass of the lighter object?

ANS: \_\_\_\_\_

Angular momentum

- 3) What is the angular momentum of a 25 kg object circling with a radius of 1.0 km and a speed of  $44 \text{ m s}^{-1}$ ?

ANS: \_\_\_\_\_

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Momentum

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1)  $5.00 \times 10^5 \text{ kg m s}^{-1}$

2) 4.5 kg

3)  $48.4 \text{ kg m s}^{-1}$