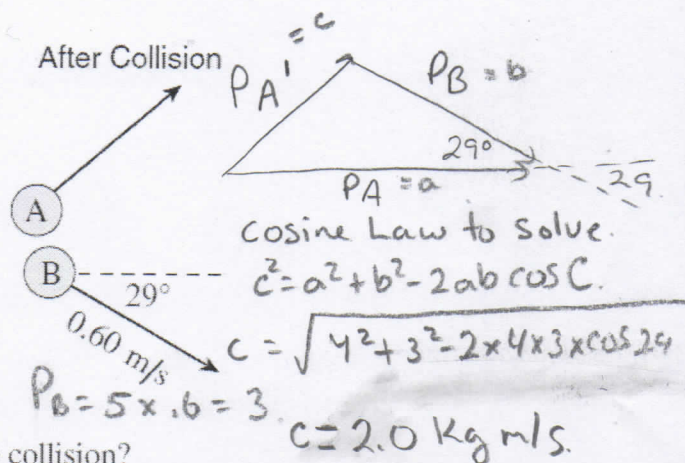
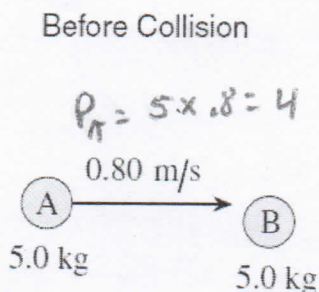


Physics 12 Review #29

1.

A 5.0 kg puck (A) moving at 0.80 m/s to the right collides obliquely with an identical stationary puck (B). Puck B then moves at 0.60 m/s as shown.



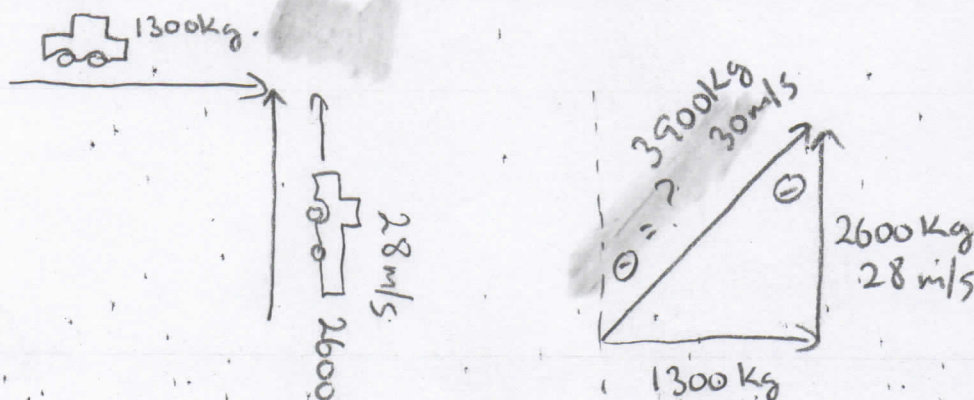
What is the magnitude of the momentum of puck A after the collision?

- A. 1.0 kg · m/s
- B. 2.0 kg · m/s
- C. 3.0 kg · m/s
- D. 5.0 kg · m/s

2.

A 1300 kg car moving east collided with a 2600 kg SUV moving north at 28 m/s. The vehicles became stuck together. If the speed of the vehicles immediately after the collision was 30 m/s, what was their direction?

- A. 21° E of N
- B. 52° E of N
- C. 58° E of N
- D. 69° E of N



$$\cos \theta = \frac{\text{adj}}{\text{hyp}} = \frac{2600 \times 28}{3900 \times 30}$$

$$\cos \theta = 0.7828$$

$$\theta = 51.5^\circ$$