

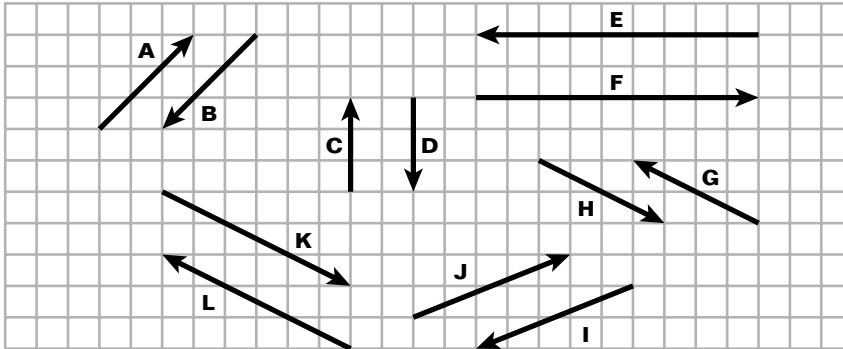
Section
6-3

HOLT PHYSICS

Diagram Skills

Elastic and Inelastic Collisions

Use the following vectors to answer items 1–5.



Consider a collision between two objects. Assume that the initial momentum of object 1 is represented by vector **A** ($\mathbf{p}_{1,i} = \mathbf{A}$) and the initial momentum of object 2 is represented by vector **K** ($\mathbf{p}_{2,i} = \mathbf{K}$).

1. In the space below, construct a vector diagram showing the total initial momentum just before the collision.

2. Which vector above represents the total initial momentum?

3. Which vector above represents the total final momentum?

4. If the final momentum of object 1 is represented by vector **H** ($\mathbf{p}_{1,f} = \mathbf{H}$), construct a vector diagram in the space below to find the final momentum vector, $\mathbf{p}_{2,f}$. (Remember that $\mathbf{p}_{1,f} + \mathbf{p}_{2,f} = \mathbf{p}_f$.)

5. Which vector above represents $\mathbf{p}_{2,f}$?
