

7. A ball is moving at **4.5 m/s** and has a momentum of **75 kg·m/s**. What is the ball's **mass**?

8. Your brother's mass is **40.0 kg**, and he has a **1.30 kg** skateboard. What is the combined **momentum** of your brother and his skateboard if they are going **8.50 m/s**?

9. Your brother's mass is **55.0 kg**, and he has a **2.0 kg** skateboard. What is the combined **momentum** of your brother and his skateboard if they are going **8.50 m/s**?

10. A hockey player makes a slap shot, exerting a constant force of **25.0 N** on the puck for **0.16 seconds**. What is the **magnitude** of the **impulse** given to the puck?

11. A hockey player makes a slap shot, exerting a constant force of **40.0 N** on the puck for **0.20 seconds**. What is the **magnitude** of the **impulse** given to the puck?

12. A constant force of **5.00 N** acts on a **2.50 kg** object for **10.0 s**. What are the changes in the object's **momentum** and **velocity**?

13. A constant force of **20 N** acts on a **10.0 kg** object for **5.0 s**. What are the changes in the object's **momentum** and **velocity**?