

4. In the game of curling, the red team's stone is traveling at 8m/s, hits the blue team's stone (at rest), and leaves at an angle of 30° to the left of its original direction, while the blue team's stone leaves at 30° to the right of red team's stone's original direction. What is the final speed of each stone? [4.61 m/s]
5. A car (A) of unknown mass heading west at 6m/s collides with a 3500kg car (B) heading north at 12m/s. What is the car's mass (A) if the final velocity of car (B) is 10m/s and the angle is 25 degrees West of North? [2465.3 kg]
6. A 2600 kg car heading East at 15.0 m/s collides with a 3500 kg car at rest but with its transmission in neutral (so it will roll when hit). After the collision, both objects have velocities directed 30° on either side of the original line of motion of the 2600 kg car. What are the final speeds of the two objects? Is this collision Elastic or Inelastic? Prove with work, not a guess.
[6.435 m/s , 8.66 m/s , Inelastic]