

## 23.3: Centrifugal Force

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Sometimes it is helpful to think of uniform circular motion in terms of a fictitious centrifugal force. We've all experienced this: when you're in an automobile making a tight turn at high speed, you feel what appears to be a "force" pushing you outward, away from the center of the circle. This is called fictitious force because there really is no force pushing you outward; instead, you're trying to continue moving in a straight line while the car is turning underneath you. The "centrifugal force" is really just inertia: it is an artifact of making an observation in the rotating reference frame of the car, rather than in an "inertial" (non-accelerating) frame.

The centrifugal force, like the centripetal force, has a magnitude of  $mv^2/r$ .

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