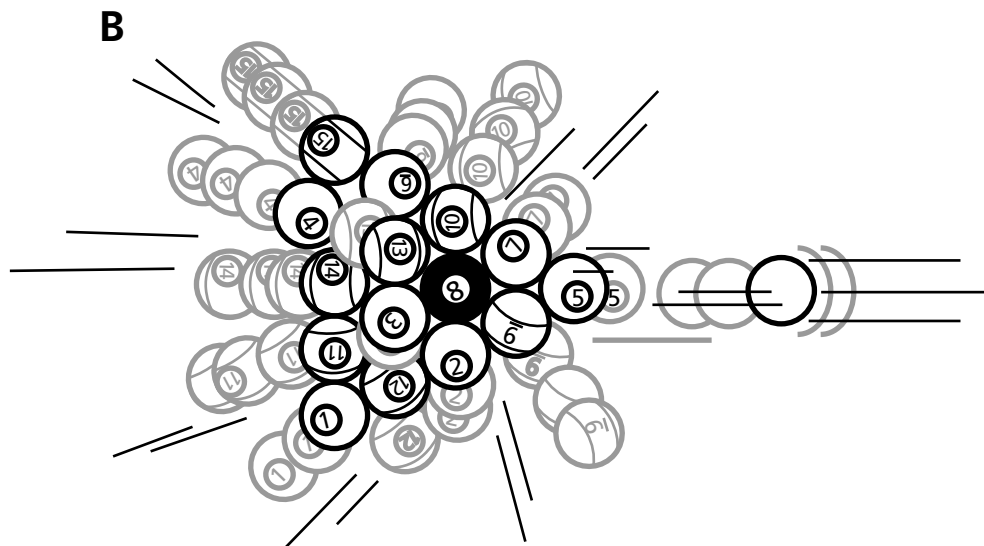
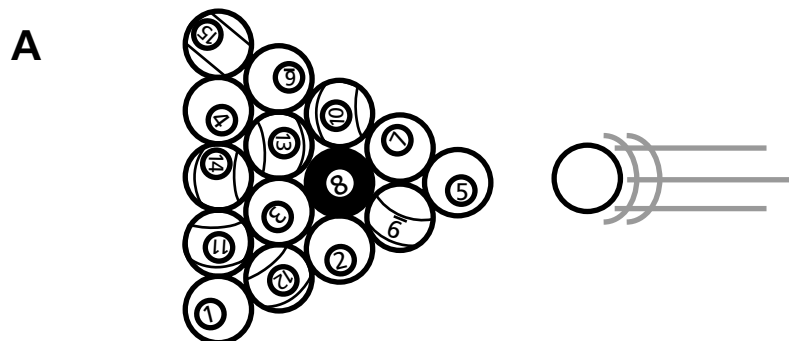


Changing Motion

Did you know that billiard balls can be used to study the transfer of energy between objects?

1. Describe the motion of the balls in Figure A.
2. Figure B shows the motion of the billiard balls after impact. Explain why the motion of the balls changes in Figure B.



ANSWERS

1. The racked balls in Figure A are motionless. The cue ball moves in a straight line and at high speed toward the racked balls.

2. Students should not be assessed on this response. Accept all reasonable responses. The high-speed cue ball strikes the motionless balls and transfers momentum and kinetic energy to them, causing them to move.