The diagram at the right depicts the path of two colliding steel balls rolling on a table. Which set of arrows best represents the direction of the change in momentum of each ball?

(1) \[ P \rightarrow Q \]
(2) \[ P \downarrow Q \]
(3) \[ P \leftarrow Q \]
(4) \[ P \rightarrow Q \]
(5) \[ P \uparrow Q \]
A ball on a table sliding and hitting a block. Which ball exerts the most force on the block?

1. (bounces back)

2. (bounces off)

3. (captured)
Which ball will knock the block over?

1. A superball
2. A clay ball of equal mass
3. Both
4. Neither