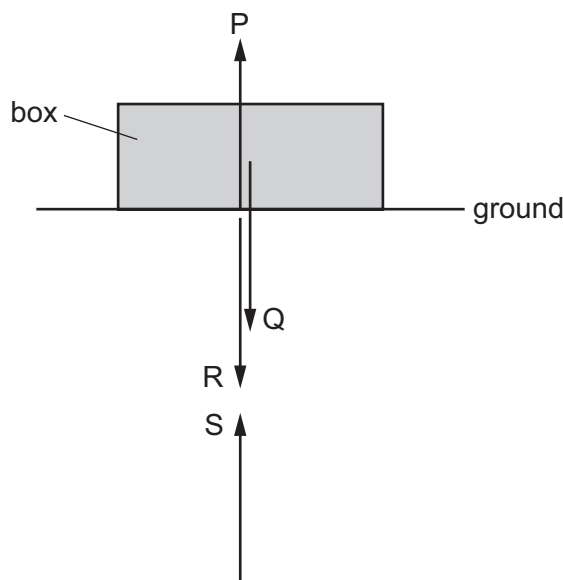


- 12 A box is shown resting on the ground. Newton's third law implies that four forces of equal magnitude are involved. These forces are labelled P, Q, R and S.

Forces P and Q act on the box. Forces R and S act on the Earth.

For clarity, the forces are shown slightly separated.



Which statement about the forces is correct?

- A P is the equal and opposite force to Q and both are forces of contact.
 - B Q is the equal and opposite force to P and both are gravitational forces.
 - C R is the equal and opposite force to S and both are forces of contact.
 - D S is the equal and opposite force to Q and both are gravitational forces.
- 13 Two spheres travel along the same line with velocities u_1 and u_2 . They collide and after collision their velocities are v_1 and v_2 .



Which collision is **not** elastic?

	u_1/ms^{-1}	u_2/ms^{-1}	v_1/ms^{-1}	v_2/ms^{-1}
A	2	-5	-5	-2
B	3	-3	0	6
C	3	-2	1	6
D	5	2	3	6