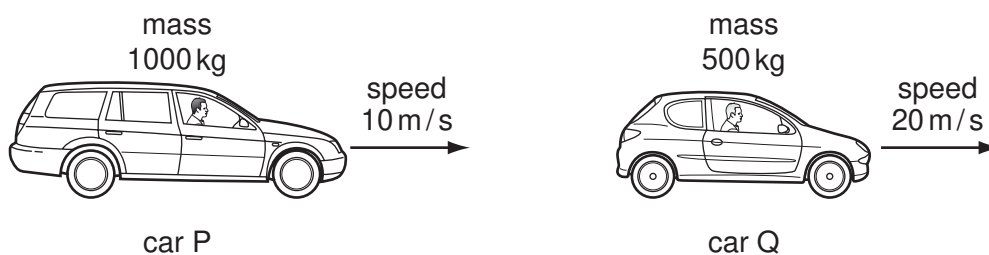


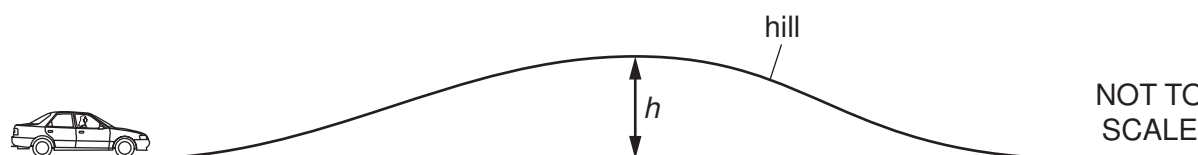
- 8 Two cars, P and Q, have different masses and different speeds as shown.



Which row correctly compares the momentum and the kinetic energy of P with the momentum and the kinetic energy of Q?

	momentum	kinetic energy
<b>A</b>	P greater than Q	P equal to Q
<b>B</b>	P equal to Q	P equal to Q
<b>C</b>	P equal to Q	P less than Q
<b>D</b>	P less than Q	P greater than Q

- 9 A car of mass 800 kg travels over a hill of height  $h$ .



By travelling to the top of the hill, the car gains 40 000 J of gravitational potential energy.

The gravitational field strength  $g$  is 10 N/kg.

What is the height  $h$  of the hill?

- A** 5.0 m      **B** 20 m      **C** 50 m      **D** 500 m
- 10 A lamp has a power input of 5.0 W. It wastes 1.0 W of power heating the surroundings.  
What is the efficiency of the lamp?
- A** 20%      **B** 50%      **C** 80%      **D** 120%
- 11 The box contains the names of eight different energy resources.

natural gas	geothermal	solar	waves
hydroelectric	oil	wind	coal

How many of these energy resources are renewable?

- A** 3      **B** 4      **C** 5      **D** 6