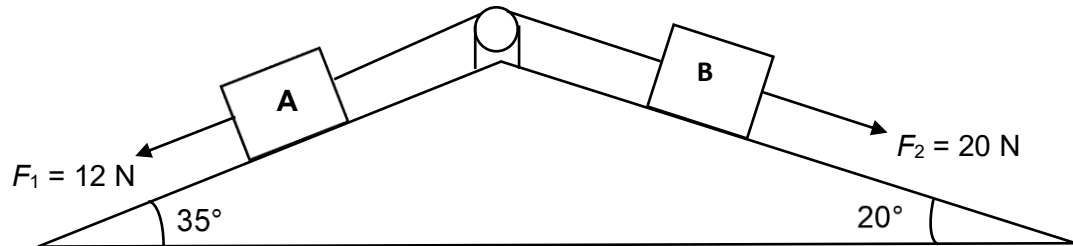**3** Two blocks, A and B, connected by a massless rope over a smooth pulley, are on a smooth incline plane with angles of inclination as shown in the diagram. The masses of blocks A and B are 2.0 kg and 5.0 kg respectively. The two blocks are acted upon by two external forces, F_1 and F_2, respectively as shown in the diagram with $F_1 = 12$ N and $F_2 = 20$ N.

What is the tension in the rope?

A   21 N

B   27 N

C   39 N

D   42 N