13 An object of weight 120 N is supported in equilibrium by two strings as shown.
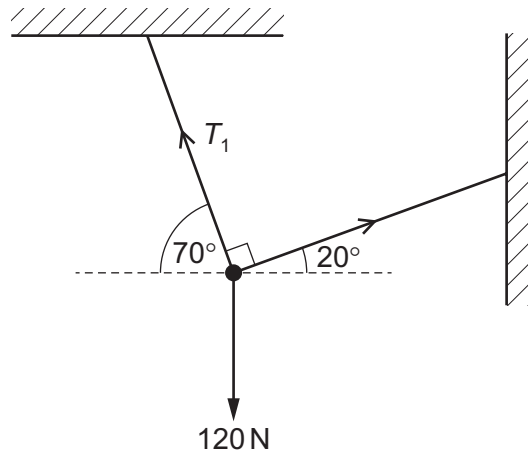

What is the tension T_1 in the left-hand string?

A 41 N **B** 77 N **C** 113 N **D** 128 N

14 In a large container in an oil refinery, three oils of different densities are mixed. No chemical activity occurs.

The mixture consists of:

1200 kg of oil of density 1100 kg m^{-3}

1500 kg of oil of density 860 kg m^{-3}

4000 kg of oil of density 910 kg m^{-3}.

What is the density of the mixture?

A 927 kg m^{-3} **B** 933 kg m^{-3} **C** 957 kg m^{-3} **D** 1045 kg m^{-3}

15 An electric motor produces 120 W of useful mechanical output power. The efficiency of the motor is 60%.

Which row is correct?

	electrical power input / W	waste heat power output / W
A	72	48
B	192	72
C	200	72
D	200	80