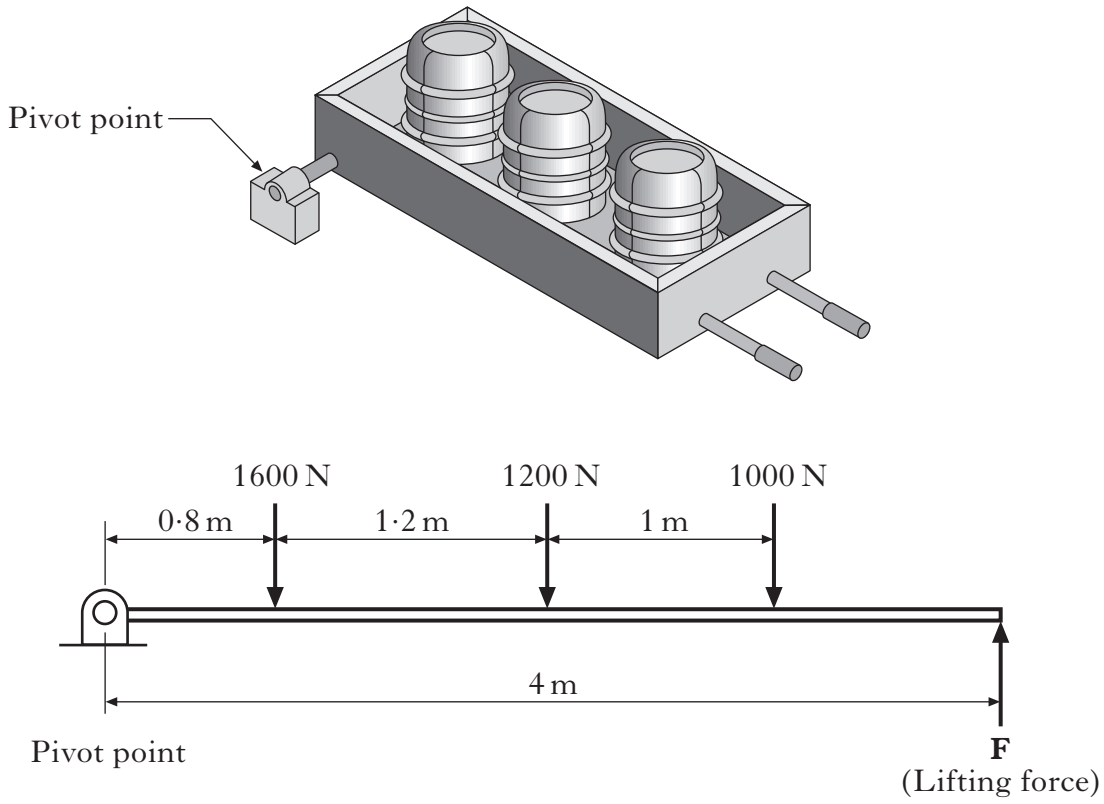


8. A contestant in a weight-lifting competition is required to complete a “barrel lift”. A simplified diagram is shown below.



- (a) Calculate the size of the lifting force **F**. (Take moments about the pivot point.)

- (b) Describe **two** ways of reducing friction at a pivot point.

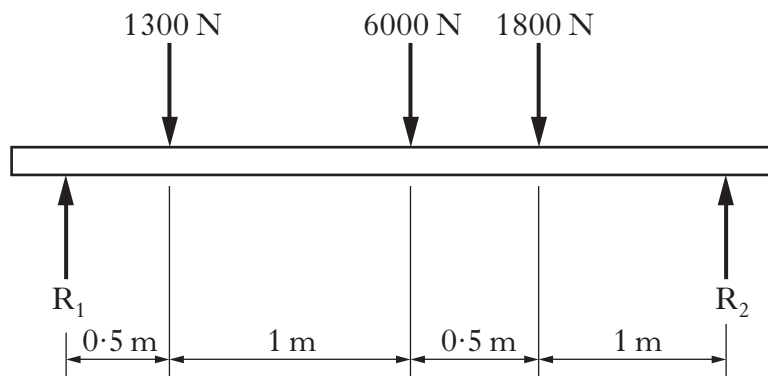
1 _____

2 _____

3
2
1
0

2
1
0

10. During the design of a new lightweight family car the forces acting on it are analysed.



The forces are shown on the diagram above.

- (a) State the name of this type of diagram.

- (b) Calculate the reaction force at R_2 .
(Take moments about R_1).

1
0

3
2
1
0

[END OF QUESTION PAPER]