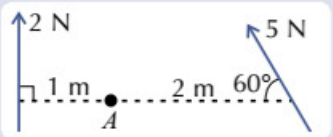
Moments

In this lifetime there are moments: moments of joy and of sorrow, and those moments where you have to answer questions on moments in exams. You might also want to take a moment to brush up on resolving forces.

Moment = Force × Perpendicular Distance from the force's Line of Action

A '**moment**' is the **turning effect** a force has **around a point**. The **larger the force**, and the **greater the distance** from a point, then the **larger the moment**. In an exam question, you might be given a distance between the point and the force that's **not perpendicular** to the force's '**line of action**'. You'll need to **resolve** to find the **perpendicular distance** or the **perpendicular component** of the force.

Example: Find the sum of the moments of the forces shown about the point A.



Calculating the **clockwise moment** is simple as the line of action is perpendicular to A:

$2 \times 1 = \mathbf{2\ Nm}$

The units of moments are newton-metres (Nm) — unimaginative, but easy to remember.