

## *Combining sentences with an -ing clause*

Look at the following sentences:

- (a) Belt drives are not so positive as gear drives.
- (b) Belts tend to slip on high loads.

These can be combined into one sentence:

- (c) Belt drives are not so positive as gear drives, belts tending to slip on high loads.

Combine each of the following pairs of sentences into one sentence by using an *-ing* clause in the same way:

1. A chain drive is similar to a belt drive except that the chain passes over sprockets on the chain wheel.  
This arrangement ensures that no slip takes place.
2. When a resultant force acts on a body an acceleration is produced.  
Its value depends on the mass of the body.
3. The length of the steel increases in proportion to the forces applied.  
Its cross-sectional area is unchanged.
4. The screw-jack is a screw revolving in a fixed nut.  
The screw thread provides a means of converting circular motion to motion in a straight line.
5. Work done by a force can be represented by a work diagram in the form of a graph.  
The vertical axis represents the force and the horizontal axis the distance moved.
6. The wheelbarrow is an example of a second-order lever.  
The load is carried between the fulcrum and the effort.
7. When a force is applied to the edge of a door it will turn.  
The hinge forms a fulcrum for the door.
8. Pressure is measured in newtons per square metre.  
The word 'per' implies that the force in newtons is divided by the area in square metres.
9. A crowbar is a first-order lever.  
The fulcrum is the heel of the crowbar.
10. The human forearm is a lever.  
The effort is provided by the muscle joining the upper arm to the forearm.