

The logo for MEI (Mathematics Education in Industry) features the letters 'MEI' in a bold, sans-serif font. The 'M' and 'I' are dark blue, while the 'E' is a lighter blue.

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Practical activities in mechanics

Warm up

If it takes 3 men 5 days to paint 2 houses,
how long will it take 5 men to paint 4 houses?



What assumptions did you make?



Common assumptions in mechanics

- The object is a particle
- No air resistance
- No friction ('smooth')
- Uniform objects
- Light objects (e.g. strings)
- ...

5 mechanics practicals

- Being developed as part of an MEI project with the IET.
- Effective demonstration of mechanics principles in mathematics.
- Use readily and cheaply available equipment and materials.
- Suitable for the new 2017 A level curriculum.

5 mechanics practicals

1. Pulleys: connected particles in motion
2. Inclined planes: friction and resolving forces
3. Pulleys: forces in equilibrium
4. Beam and mass: exploring moments
5. Projectiles: motion in two dimensions

1. Pulleys: connected particles in motion



2. Inclined planes: friction and resolving forces



3. *Pulleys: forces in equilibrium*



4. *Beam and mass: exploring moments*



5. *Projectiles: motion in two dimensions*



Practical activities in mechanics

- How easy were the practicals to master and complete?
- How would you use them to develop students' understanding?
- Further thoughts and suggestions.

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More mechanics in action...

- Another balancing act
- Projectile motion