

## G11 PHYSICAL SCIENCE PAPER 1 REVISION

### QUESTION 2 (Start on a new page.)

Three forces, **P**, **Q** and **R**, of magnitudes 800N, 200N and 600N respectively, act on a point **O** in the directions shown in the diagram below.

The forces are NOT drawn to scale.



Determine the magnitude and direction of the resultant force by  
**CALCULATION**

(8)  
[8]

### QUESTION 3 (Start on a new page.)

A constant force, **F**, pulls a 35kg block at a constant speed over a rough horizontal surface, **AB**, as shown in the diagram below. The coefficient of kinetic friction ( $\mu_k$ ) between the block and the surface is 0,4.



3.1 Draw a labelled free-body diagram showing ALL the forces acting on the block.

(4)

3.2 State Newton's first law of motion in words.

(2)

Calculate the magnitude of the:

3.3 Force **F**

(6)

# Physical Science Paper 1 2013

**Jonas Bergmann**



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