# Solve assignment problems by inspection or the Hungarian algorithm.

## Key skills | Free preview

Learning target: Solve assignment problems by inspection or the Hungarian algorithm.

An assignment pairs each person with one task and each task with one person. Subtracting a constant from every entry in a row or column changes every complete assignment by the same total, preserving the optimum. If reduced zero entries allow an independent assignment, the sum of the reductions gives a lower bound that this assignment reaches.

## Try the mathematics

Task 1. Four workers A–D have task costs [[9,2,7,8],[6,4,3,7],[5,8,1,8],[7,6,9,4]]. Perform row and column reductions and choose independent zeroes to find a minimum-cost assignment.

## Continue with the full worksheet

The complete resource has 2 focused task sets and substantive worked solutions. Use an exercise book or print the A4 worksheet. This preview shows the first task without its full solution.

Find this resource:
https://resources.aspiretopowerlearning.com.au/vce/skills/aspire-internal-gm-u34-o1-aos2-networks-ks-06/

## Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). General Mathematics; Units 3–4; Outcome 1; Key skills; Networks and decision mathematics; bullet 6; p. 92.

The learning target is a concise paraphrase. Aspire reference: aspire-internal-gm-u34-o1-aos2-networks-ks-06. This is an internal identifier, not an official VCAA code.

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