

1A The North-West Corner Method

In a transportation problem, what is meant by:

the supply (or stock):

the demand:

the unit cost:

1. Three suppliers A, B and C each produce road grit which has to be delivered to council depots W, X, Y and Z. The stock held at each supplier and the demand from each depot is known. The cost, in pounds, of transporting one lorry load of grit from each supplier to each depot is also known. This information is given in the table.

	W	X	Y	Z	Stock
A	180	110	130	290	14
B	190	250	150	280	16
C	240	270	190	120	20
Demand	11	15	14	10	50

Use the information in the table to write down:

- a) the number of lorry loads of grit that each supplier can supply
- b) the number of lorry loads of grit required at each depot
- c) the cost of transporting a lorry load of grit from A to W
- d) the cost of transporting a lorry load of grit from C to Z
- e) Which is the cheapest route to use?
- f) Which is the most expensive route to use?

The transportation algorithm (the five steps):

The north-west corner method:

Number of occupied cells (routes used) for m supply points and n demand points:

2. Use the north-west corner method to find an initial solution to the problem described in question 1, and state its cost.

Units transported

	W	X	Y	Z	Stock
A					14
B					16
C					20
Demand	11	15	14	10	50