

Money bags

Ram divided 15 pennies among four small bags.

He could then pay any sum of money from 1p to 15p, without opening any bag.

How many pennies did Ram put in each bag?



55

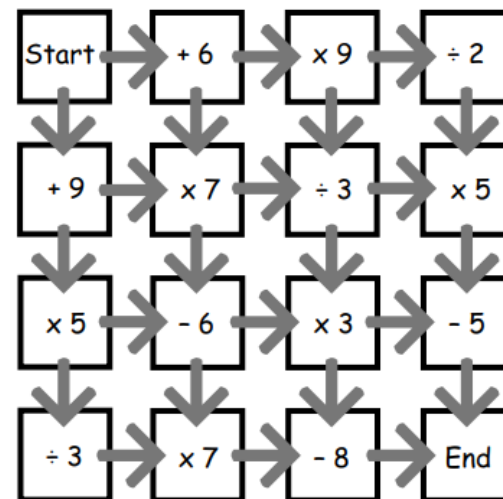
Teaching objectives

Solve mathematical problems or puzzles.
Explain methods and reasoning.

Maze

Start with zero.

Find a route from 'Start' to 'End' that totals 100 exactly.



Which route has the highest total?

Which has the lowest total?

Now try some different starting numbers.

Teaching objectives

Solve mathematical problems or puzzles.
Add and subtract two-digit numbers mentally.
Multiply and divide by single-digit numbers.

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Answers:

55) Money bags: Ram put 1p, 2p, 4p and 8p in the four bags. Any sum from 1p to 15p can be made with these amounts.

62) Maze: There are two routes that total 100 exactly:

$$+ 6 \times 7 - 6 \times 3 - 8 = 100$$

$$+ 9 \times 7 \div 3 \times 5 - 5 = 100$$

The route giving the highest total is: $+ 9 \times 7 - 6 \times 7 - 8 = 391$

The route giving the lowest total is: $+ 6 \times 7 \div 3 \times 3 - 8 = 34$