

AFRICAN INSTITUTE FOR MATHEMATICAL SCIENCES SCHOOLS ENRICHMENT CENTRE (AIMSSEC)

AIMING HIGH

MONEY BAGS

Ram had 15 coins, **all the same kind**, and he put them into 4 bags. He labelled each bag with the number of coins inside it. He could then pay any sum of money from 1 coin to 15 coins with one or more of the bags and without opening any of the bags.



How could he do that?

HELP

Try this for yourself. Use stones or counters for the coins or make them from scrap paper. Experiment by putting the coins in 4 piles or bags and rearrange them until you find the solution. Keep a record of what you have tried to save wasting time by trying the same thing over and over again.

NEXT

Suppose you had another bag and some more coins. What would be the amount to put in the fifth bag so you could make all the amounts 16, 17, 18, and as many as possible?