## Face Totals

## You need $\square$ a photocopy of the shapes

## Activity

The numbers 2 and 4 have been placed in two corners of the skeleton cube below. On your photocopied sheet, place the numbers 1 to 8 in the corner circles of the first cube. The circles in each square face must add up to 18 .

This tetrahedron has face totals of $6,7,8$, and 9 .


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Use the numbers 2, 4, 6, 8, $10,12,14$, and 16 in the corner circles of the second cube on your sheet. The circles in each square face must add up to 36 .

a. Put different digits in each circle so that the face totals of the tetrahedron on your sheet are $8,10,11$, and 13 .

b. How many solutions are possible using $8,10,11$, and 13 or $6,7,8$, and 9 as the face totals?

