

Dividing a Clock Face

Problem

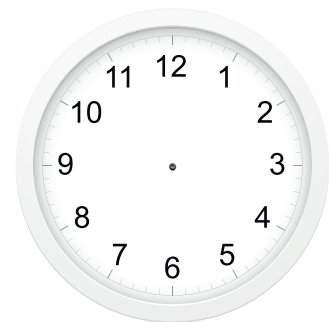
A company makes clocks and wants to design clock faces that use the twelve numbers on the clock face in special ways.

Design 1

They want to divide the clock face using one straight line so that the numbers in each part of the clock face add up to the same total.



Where could they place the straight line?

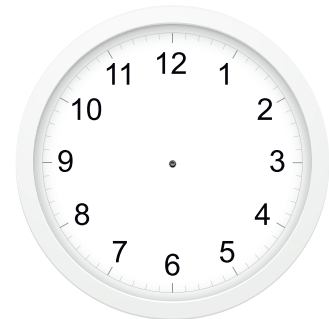


Design 2

They want to divide the clock face using two straight lines so the numbers in each part of the clock face add up to the same total.



Where could they place the two straight lines?



Design 3

They want to divide the clock face into six parts so that in each part there are two numbers and they add up to the same total.



Where could they place the required lines?

