



- TG 3** (a) In how many ways can the numbers 1, 2, 3, 4, 5, 6 be arranged around a circle?
PC (b) How many of these arrangements have at least two even numbers together?
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(a) $\frac{6!}{6} = 5!$
 $= 120$

(b) Consider the number of ways when the odd and even number are alternating: $2! \times 3! = 12$.

Arrangements when at least two even numbers together = $120 - 12 = 108$.

* These solutions have been provided by [projectmaths](http://projectmaths.com.au) and are not supplied or endorsed by NESA.

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