Circular Permutations

Total points = 40

Problem Set

1. $n = 8$ ✓
   $P = [(n-2)-1]!3!$ ✓
   $P = [(8-2)-1]!3!$ ✓
   $= 5!3!$ ✓
   $= \boxed{720}$ ✓ ways ✓
2. $n = 6$ ✓
   $P = [(n-1)-1]!2!$ ✓
   $P = [(6-1)-1]!2!$ ✓
   $= 4!2!$ ✓
   $= \boxed{48}$ ✓ ways ✓
3. $n = 10$ ✓
   $P = \frac{(10-1)!}{2}$ ✓
   $P = \frac{9!}{2}$ ✓
   $= \boxed{181,440}$ ✓ ways ✓
4. $n = 7$ ✓
   $P = (7-1)!$ ✓
   $= 6!$ ✓
   $= \boxed{720}$ ✓ ways ✓
5. a. $n = 13$ ✓
      $P = (13-1)!$ ✓
      $= 12!$ ✓
      $= \boxed{479,001,600}$ ✓ ways ✓
   b. $n = 13$ ✓
      $P = [(n-1)-1]!2!$ ✓
      $P = [(13-1)-1]!2!$ ✓
      $= 11!2!$ ✓
      $= \boxed{79,833,600}$ ✓ ways ✓
   c. $n = 13$ ✓
      $P = (n-1)! - [(n-1)-1]!2!$ ✓
      $P = (13-1)! - [(13-1)-1]!2!$ ✓
      $= 12! - 11!2!$ ✓
      $= 479,001,600 - 79,833,600$ ✓
      $= \boxed{399,168,000}$ ✓ ways ✓

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