6.) $_{10}C_8 = \frac{10!}{8!(10-8)!} = \frac{10!}{8! \cdot 2!} = \frac{3628800}{80640} =$ **45 octagons**

7.) $_{25}C_{10} = \frac{25!}{10!(25-10)!} = \frac{25!}{10! \cdot 15!} = 3.26876E+6 =$ **3268760 ways**

8.) $_9C_3 = \frac{9!}{3!(9-3)!} = \frac{9!}{3! \cdot 6!} = \frac{362880}{4320} =$ **84 bracelets**

9.) $_{12}C_2 = \frac{12!}{2!(12-2)!} = \frac{12!}{2! \cdot 10!} = \frac{479001600}{7257600} =$ **66 elimination games**

10.) $_8C_3 \cdot {}_2C_2 = \frac{8!}{3!(8-3)!} \cdot \frac{2!}{2!(2-2)!} = \frac{8!}{3! \cdot 5!} \cdot \frac{2!}{2!} = \frac{40320}{720} \cdot \frac{2}{2}$

$= 56 \cdot 1 =$ **56 ways**