# Work on these with your partner(s) at the board

1. Use Pascal's triangle to compute $\binom{6}{3}$ and $\binom{6}{4}$

2. Use the Binomial Theorem to expand each of the following:

   (a) $(p+q)^5$ (b) $(u-v)^4$ (c) $(x-3y)^3$

3. Find the coefficient of the given term.

   (a) $u^7v^3$ in $(2u-v)^{10}$ (b) $x^8y^3$ in $(2x+\frac{y}{2})^{11}$

4. Simplify each of the following:

   (a) $\displaystyle\sum_{k=0}^{11}\binom{n}{k}2^{n-k}3^k$ (b) $\displaystyle\sum_{k=0}^{11}\binom{n}{k}4^k$