1) Expand $(x + 3)^3$

2) r is directly proportional to s. When $r = 40$, $s = 5$.
   Find the value of r when $s = 7$

3) Simplify $\dfrac{x^2+7x+12}{2(x+3)-(x+2)}$

4) If $f(x) = 3 + 2x^2$, find the value of $f(-3)$

5) Find the coordinates of the vertex of the graph
   $y = x^2 + 10x + 12$