

The values of the third row of Pascal's triangle are given below

1	3	3	1
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a) Write down the values in the fourth row of Pascal's triangle

b) Hence or otherwise, find the term in  $x^2$  in the expansion of  $(3x + 2)^4$

a)

1	4	6	4	1
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b)

$$\begin{aligned}6 \times (3x)^2 \times 2^2 &= 6 \times 3^2 x^2 \times 2^2 \\&= 6 \times 9x^2 \times 4 \\&= 6 \times 9 \times 4x^2 \\&= 54 \times 4x^2 \\&= 216x^2\end{aligned}$$