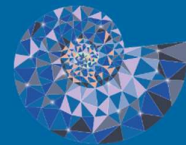


# Binomial expansion



## Gold

Find the binomial expansion of:

$$\frac{x}{\sqrt{4-x}}$$

in ascending powers of  $x$  up to and including the  $x^3$  term, simplifying each term. State the range of  $x$  values for which the expansion is valid.

## Silver

Find the binomial expansion of:

$$\frac{2}{(3x+1)^2}$$

in ascending powers of  $x$  up to and including the  $x^3$  term, simplifying each term. State the range of  $x$  values for which the expansion is valid.

## Bronze

Find the binomial expansion of:

$$\sqrt{x+1}$$

in ascending powers of  $x$  up to and including the  $x^3$  term, simplifying each term.