

# Synthetic Division Steps: $x^3 + 2x^2 + 3x - 6 \div (x-1)$

Step 1: Equate the divisor to 0, and solve for  $x$ .

$$x - 1 = 0$$

$$\therefore x = 1$$

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Step 2: Write this value of  $x$  in a division box to the left of the problem

$$\underline{1} \mid$$

Step 3: Ensure that the terms of the dividend have been arranged in descending order, then write down the co-efficients of each term of the dividend as shown below:

$$\underline{1} \mid \begin{array}{cccc} 1 & 2 & 3 & -6 \end{array}$$

Step 4: Bring the first number straight down.

$$\underline{1} \mid \begin{array}{cccc} 1 & 2 & 3 & -6 \\ \downarrow & & & \\ 1 & & & \end{array}$$

Step 5: Multiply the number that was brought down with the number in the division box, and write down the number in the next column.

$$\underline{1} \mid \begin{array}{cccc} 1 & 2 & 3 & -6 \\ \downarrow & 1 & & \\ 1 & & & \end{array}$$