



Use pages 174-175 to help you

HOW FAST CAN BACTERIA MULTIPLY?

When conditions are ideal for bacteria, they can multiply very quickly. Bacteria multiply by dividing into two – a process called ‘binary fission’.

When the conditions (temperature, moisture, atmosphere and nutrients) suit them, some food poisoning bacteria can divide into two as often as every 10 minutes.

If a food contains 10 food poisoning bacteria and it is left in conditions that allow each bacterium to divide into two every 10 minutes, how long will it take for there to be 1 million bacteria in the food?



Use a calculator and fill in the table below to find out.

Number of minutes	Number of bacteria
0	10
10	20
20	
30	
40	
50	
60 (1 hour)	
70	
80	
90	
100	
110	
120 (2 hours)	
130	
140	
150	
160	
170	
180 (3 hours)	