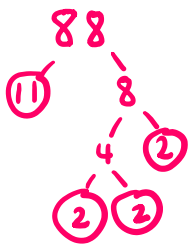
Prime Factorisation

SCAN ME

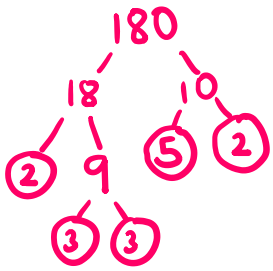
REVISE THIS TOPIC

1 Write 88 as a product of prime factors.
Give your answer in index form. **[3 marks]**



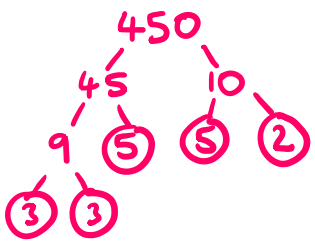
Answer $2^3 \times 11$

2 Write 180 as a product of prime factors.
Give your answer in index form. **[3 marks]**



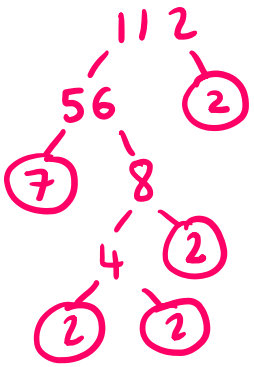
Answer $2^2 \times 3^2 \times 5$

3 Write 450 as a product of prime factors.
Give your answer in index form. **[3 marks]**



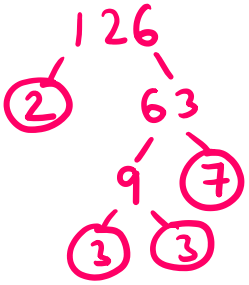
Answer $2 \times 3^2 \times 5^2$

4 Write 112 as a product of prime factors.
Give your answer in index form. **[3 marks]**



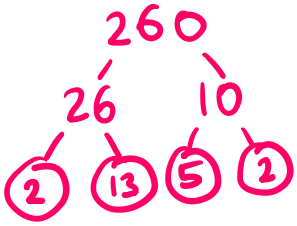
Answer $2^4 \times 7$

5 Write 126 as a product of prime factors.
Give your answer in index form. **[3 marks]**



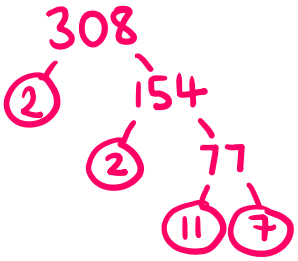
Answer $2 \times 3^2 \times 7$

6 Write 260 as a product of prime factors.
Give your answer in index form. **[3 marks]**



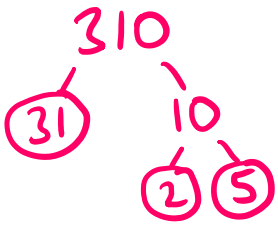
Answer $2^2 \times 5 \times 13$

7 Write 308 as a product of prime factors.
Give your answer in index form. **[3 marks]**



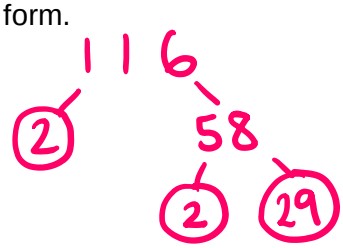
Answer $2^2 \times 7 \times 11$

8 Write 310 as a product of prime factors.
Give your answer in index form. **[3 marks]**



Answer $2 \times 5 \times 31$

9 Write 116 as a product of prime factors.
Give your answer in index form. **[3 marks]**



Answer $2^2 \times 29$

18

Turn over ►

10 Adil was asked to express 360 as a product of prime factors.

He says,

"The answer is $2^3 \times 9 \times 5$"

Is Adil correct?
You must give a reason for your answer. **[1 mark]**

No - 9 is not prime.

It should be $2^3 \times 3^2 \times 5$

11 Becca thinks of two numbers, A and B.

$A = 2^3 \times 3^4 \times 11$

$B = 10A$

Write B as a product of prime factors. **[2 marks]**

$10 = 2 \times 5$

Answer $2^4 \times 3^4 \times 5 \times 11$

12 Cameron thinks of two numbers, C and D.

$C = 2 \times 3^3 \times 5^4$

$C : D = 3 : 5$

Write D as a product of prime factors. **[2 marks]**

$3 : 5$ $\div 3$ $\div 3$ $\rightarrow 1 : \frac{5}{3}$

$D = \frac{C \times 5}{3}$

Answer $2 \times 3^2 \times 5^5$

5