STEP 1 : ADDING & SUBTRACTING WITH INDICES

Simplify:

1) $2x^2 + 7x^2 =$

2) $3x^3 + 8x^3 =$

3) $7a^2 + 2a^2 + b =$

4) $3b^3 + b^3 - b^2 - b^2 =$

5) $2x^2 + 3x^3 + 3x^2 + 2x^3 =$

STEP 2 : SIMPLIFY BY MULTIPLYING (ADDITION LAW)

Match the calculations to the simplified version

$a \times a \times a$	$a^2 \times a^5$	$a^2 \times a \times b^3 \times b^2$

a^7	a^3	a^3b^5

STEP 3 : SIMPLIFY BY DIVIDING (SUBTRACTION LAW)

Work out the missing values

1) $3^{\square} \div 3^2 = 3^{\square}$

2) $x^8 \div x^{\square} = x^{\square}$

3) $a^{\square} \div a^{\square} = a^5$

4) $4a^2 \div 2a = \square a$

5) $12x^{\square} \div \square x^2 = 3x^{\square}$

6) $50x^{\square} \div 2x^{\square} = \square x^{15}$

7) $\frac{\square x^9}{\square x} = 8x^7$

STEP 4 : POWERS OF POWERS

1) $(2^2)^3 =$

2) $(3^2)^{\square} =$

3) $(x^2)^3 =$

4) $(x^{\square})^7 =$

5) $(x^5)^{\square} =$

6) $(2x^2)^3 =$

7) $(7x^{\square})^2 =$

8) $(4x^8)^3 =$

9) $(3x^{\square})^{\square} = 27x^6$

10) $(5x^{11})^{\square} = \square x^{33}$