Multiplying Exponentials

Product Rule: $A^m \times A^n = A^{m+n}$

Example:

Simplify $7^3 \times 7^8$ in exponential notation.

$7^3 \times 7^8 = 7^{3+8}$,

$= 7^{11}$.

Simplify the following expressions in exponential notation.

1. $6^7 \times 6^4$

2. $9 \times 9 \times 9 \times 9 \times 9$

3. $4^5 \times 4 \times 4^8$

4. $12^6 \times 12^9 \times 12^3 \times 12^2$

5. $2^2 \times 8$

6. $3^{79} \times 3^{11}$

7. $5^7 \times 5^2 \times 5^3$

8. $11^4 \times 11^4 \times 11^4 \times 11^4$

9. $49 \times 7^3 \times 7$

10. $8^{33} \times 8^5$

11. $5 \times 5^3 \times 125$

12. $10^8 \times 10^5 \times 10 \times 10^2$