

1. Nickname	Number.....
2. Nickname	Number.....

Assignment 3.2 Multiplying Power

Prime number from 1 - 20

Example 1: Write the power in base 2

1. 8	$= 2 \times \underline{\hspace{2cm}}$ $= 2^{\boxed{\hspace{1cm}}}$
2. 32	$= \underline{\hspace{2cm}}$ $= 2^{\boxed{\hspace{1cm}}}$

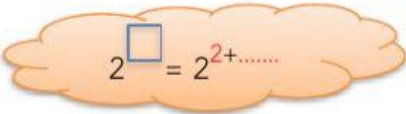
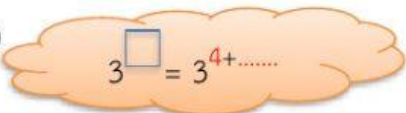
Example 2: Write the power in base 3

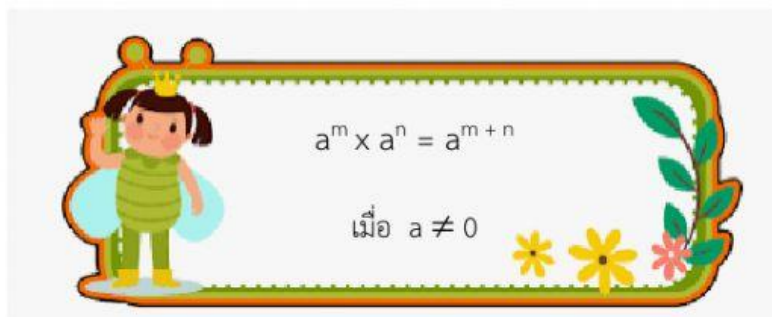
1. 27	$= 3 \times \underline{\hspace{2cm}}$ $= 3^{\boxed{\hspace{1cm}}}$
2. 81	$= \underline{\hspace{2cm}}$ $= 3^{\boxed{\hspace{1cm}}}$

Example 3: Write the power in base 5

1. 125	$= 5 \times \underline{\hspace{2cm}}$ $= 5^{\boxed{\hspace{1cm}}}$
2. 625	$= \underline{\hspace{2cm}}$ $= 5^{\boxed{\hspace{1cm}}}$

Example 4: Simplify the following power write in the single term.

1. $2^2 \times 2^5$	$= (2 \times 2) \times (2 \times 2 \times 2 \times 2 \times 2)$ $= (2 \times 2 \times 2 \times 2 \times 2 \times 2)$ $= 2^{\boxed{}}$ 
2. $3^4 \times 27$	$= (3 \times 3 \times 3 \times 3) \times (\underline{\hspace{2cm}})$ $= (\underline{\hspace{2cm}})$ $= 3^{\boxed{}}$ 
3. 125×5^4	$= (\underline{\hspace{2cm}}) \times (\underline{\hspace{2cm}})$ $= (\underline{\hspace{2cm}})$ $= 5^{\boxed{}}$
4. $(2^3 a^5) \times (2^6 a^2)$	$= (2^3 \times 2^5) \times (a^5 \times a^2)$ $= 2^{3+5} \times a^{\boxed{}}$ $= 2^{\boxed{}} \times a^{\boxed{}}$



Exercise

1. Simplify the following power using multiplying power law.

1) $2^5 \times 2^7$	$= 2^{5+7}$ $= 2^{\boxed{}}$
2) $(-2)^9 \times (-2)^{11}$	$= (-2)^{\boxed{}}$ $= (-2)^{\boxed{}}$
3) $5^4 \times 5^7 \times 5^9$	$= 5^{\boxed{}}$ $= 5^{\boxed{}}$
4) $3^5 \times 3^{11} \times 3^6 \times 3^2$	$= 3^{\boxed{}}$ $= 3^{\boxed{}}$
5) $(2^3 \times 3^2) \times (2^8 \times 3^4)$	$= (2^3 \times 2^8) \times (3^2 \times 3^4)$ $= 2^{\boxed{}} \times 3^{\boxed{}}$ $= 2^{\boxed{}} \times 3^{\boxed{}}$
6) $(7^3 b^5) \times (7^4 \times b^2)$	$= (7^3 \times \boxed{}) \times (b^5 \times \boxed{})$ $= 7^{\boxed{}} \times b^{\boxed{}}$ $= 7^{\boxed{}} \times b^{\boxed{}}$

2. Simplify the following power write in the single term.

1) 16×2^5	$= 2^{\boxed{}} \times 2^5$	$= 2^{\boxed{}}$	$= 2^{\boxed{}}$
2) $3^5 \times 81$	$= 3^5 \times 3^{\boxed{}}$	$= 3^{\boxed{}}$	$= 3^{\boxed{}}$
3) $8a^3 \times 2^6 a^7$	$= (2^{\boxed{}} \times 2^6) \times (a^3 \times a^7)$	$= 2^{\boxed{}} \times a^{\boxed{}}$	$= 2^{\boxed{}} a^{\boxed{}}$