Math worksheet on *'Exponents - Power Law - Variable Exponent Base with Known Power to Unknown Exponent Base with Known Power (Level 1)'*. Part of a broader unit on *'Exponents - Power Law - Practice'*

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1 Solve for the missing exponent (?)

$$(10^3)^{12} = (10^?)^9$$

a	b	c	d	e	f
$? = 10$	$? = 8$	$? = 3$	$? = 6$	$? = 4$	$? = 1$

2 Solve for the missing exponent (?)

$$(10^4)^6 = (10^?)^{12}$$

a	b	c	d	e	f
$? = 3$	$? = 4$	$? = 8$	$? = 10$	$? = 2$	$? = 11$

3 Solve for the missing exponent (?)

$$(10^4)^4 = (10^?)^8$$

a	b	c	d	e	f
$? = 1$	$? = 8$	$? = 11$	$? = 4$	$? = 3$	$? = 2$

4 Solve for the missing exponent (?)

$$(10^2)^9 = (10^?)^6$$

a	b	c	d	e	f
$? = 4$	$? = 12$	$? = 1$	$? = 11$	$? = 8$	$? = 3$

5 Solve for the missing exponent (?)

$$(10^4)^9 = (10^?)^{12}$$

a	b	c	d	e	f
$? = 4$	$? = 9$	$? = 10$	$? = 2$	$? = 5$	$? = 3$

6 Solve for the missing exponent (?)

$$(10^2)^{12} = (10^?)^6$$

a	b	c	d	e	f
$? = 1$	$? = 4$	$? = 2$	$? = 3$	$? = 13$	$? = 5$

7 Solve for the missing exponent (?)

$$(10^2)^8 = (10^?)^4$$

a	b	c	d	e	f
$? = 12$	$? = 9$	$? = 4$	$? = 1$	$? = 6$	$? = 10$