Exponents: Review ©2014 MATHguide.com

Name: \_

## Period:

Here is example #1. Study it until you understand it.



Use the example above t	to solve these problems. A	nswers may not all be in	tegers.
1)	$3^{x-1} = 81$	2)	$4^{3x} = 16$

3) 
$$10^{5x-1} = 100,000$$
 4)  $5^{2x+7} = 125$ 

5) 
$$\left(\frac{1}{2}\right)^{1-x} = \frac{1}{8}$$
 6)  $\left(\frac{1}{3}\right)^{5x+5} = \frac{1}{27}$ 

7) 
$$\left(\frac{2}{3}\right)^{\frac{1}{3}x-2} = \frac{16}{81}$$
 8)  $2^x = 10$ 

Review these examples concerning exponents.

Multiplying Like Bases	Dividing Like Bases	Power to a Power
$(x^2)(x^3) = x^5$	$\frac{x^6}{x^2} = x^4$	$(x^4)^2 = x^8$

Use the examples above to simplify the problems below.

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9)	$(y^4)(y^5)$	10)	$(3d^5)(7d^6)$

11) 
$$(5g^2f)(-4g^4) \cdot gf^2$$
 12)  $\frac{k^{12}}{k^4}$ 

13)	$h^2$	14)	$(a^3)^4$
	$\overline{h^9}$		

15)	$(z^2v^3)^5$	16)	Use the "multiplying of like bases" property to
			explain why the "power to a power" property
			works.