

Term 1 What happens when you raise a positive proper fraction to a power?	Definition 1 The value of the fraction decreases
Term 2 Decimals between 0 and 1 increase in value when raised to a higher power TRUE or FALSE?	Definition 2 FALSE - they DECREASE in value
Term 3 	Definition 3

Term 4 You can distribute the powers in a compound base if there is a sum of two numbers inside the parenthesis TRUE or FALSE	Definition 4 FALSE - you can only do this with multiplication inside parenthesis
Term 5 You can't distribute the powers in a compound base if the base is a product two numbers inside the parenthesis TRUE or FALSE	Definition 5 FALSE - you can distribute the exponent to each number in the base, or you can multiply the base together and then raise it to the exponent
Term 6 RULE: When multiplying two terms with the same base, _____ exponents by _____	Definition 6 combine, adding

Term 7 RULE: When dividing two terms with the same base, _____ exponents by _____	Definition 7 combine, subtracting
Term 8 RULE: When raising a power to a power, _____ exponents by _____	Definition 8 combine, multiplying
Term 9 RULE: When you see a negative exponent, think _____	Definition 9 Reciprocal

Term 10 Negative exponents essentially mean...	Definition 10 <u>Divide</u> by the base that certain number of times
Term 11 $(\frac{3}{4})^{-3} = ?$	Definition 11 $(\frac{4}{3})^3$
Term 12 $1/4^{-2} = ? = 4^2 = 16$	Definition 12 $1/ 1/4^2$

Term 13 $(-2)^3 = ? = -1/8$	Definition 13 $1/(-2)^3$
Term 14 $(3/4)^{-3} = ? = 64/27$	Definition 14 $(4/3)^3$
Term 15 $25^{3/2} = ?$	Definition 15 $\text{sq.rt } (25^3)$

Term 16

$$x^a \cdot x^b = ?$$

Definition 16

$$x^{a+b}$$

Term 17

$$a^x \cdot b^x = ?$$

Definition 17

$$(ab)^x$$

Term 18

$$x^a / x^b =$$

Definition 18

$$x^{(a-b)}$$

Term 19

$$(a/b)^x = ?$$

Definition 19

$$a^x / b^x$$

Term 20

$$(a^x)^y = ? = (a^y)^x$$

Definition 20

$$a^{xy}$$

Term 21

$$x^{-a} = ?$$

Definition 21

$$1/x^a$$

Term 22

$$x^{a/b} = b\sqrt[b]{x^a} = ?$$

Definition 22

$$(b\sqrt[b]{x})^a$$

Term 23

$$x^{a/b} = ? = (b\sqrt[b]{x})^a$$

Definition 23

$$b\sqrt[b]{x^a}$$

Term 24

$$x^a + x^a + x^a = ?$$

Definition 24

$$3x^a$$

Term 25**Definition 25****Term 26****Definition 26**

$$3^x + 3^x + 3^x = ? = ?$$

$$3 \cdot 3^x = 3^{x+1}$$

Term 27**Definition 27**

$$3^4 + 3^4 + 3^4 = ? = ? = ?$$

$$3 \cdot 3^4 = 3^1 \cdot 3^4 = 3^5$$

Term 28 Simplify or Factor $7^4 + 7^6$	Definition 28 Cannot be simplified! Factor = $7^4(7^2+1) = 7^4(50)$
Term 29 Simplify $12^7 - 3^7$	Definition 29 Cannot simplify!
Term 30	Definition 30

Term 31 You can't factor terms when the exponent is the same and the terms contain something in common in the base TRUE or FALSE?	Definition 31 FALSE - you can! e.g. $3^4 + 12^4$ can be factored because $12^4 = (2 \times 3 \times 3)^4$
Term 32	Definition 32