

Bell Work

1/14/2015

What is incorrect about the following statements:

$$(a^2)^3 = (a \cdot a)(\cancel{a \cdot a \cdot a}) = a^5$$
$$(a \cdot a)(a \cdot a)(a \cdot a) = a^6$$

$$(3z)^3 = 3z \cdot 3z \cdot 3z = 3^3 z^3$$
$$3 \cdot 3 \cdot 3 \cdot z \cdot z \cdot z$$

1. Finish creating the rules
2. Re-group and discuss the rules
3. Practice Problems - Wall Activity



$$\textcircled{4} \frac{2^7}{2^4} = \frac{\cancel{2} \cancel{2} \cancel{2} \cancel{2} 2 2 2}{\cancel{2} \cancel{2} \cancel{2} \cancel{2}} = 2^3$$

$$\frac{a^r}{a^s} = a^{r-s}$$

$$\textcircled{5} \quad \left(\frac{3}{2}\right)^3 = \frac{3}{2} \frac{3}{2} \frac{3}{2} = \frac{3^3}{2^3}$$

$$\left(\frac{a}{b}\right)^r = \frac{a^r}{b^r}$$

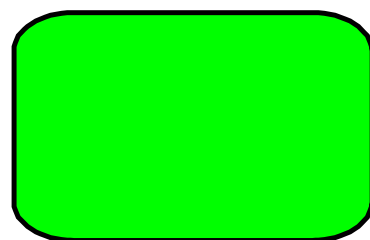
Definition

$$a^{-r} = \frac{1}{a^r}$$

$$2^{-1} = .5 = \frac{1}{2} = \frac{1}{2^1}$$

$$2^{-2} = .25 = \frac{1}{4} = \frac{1}{2^2}$$

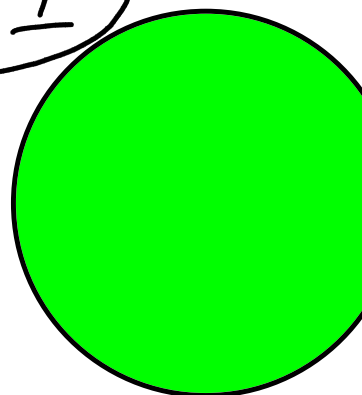
$$2^{-3} = .125 = \frac{1}{8} = \frac{1}{2^3}$$



Definition

$$a^0 = \underline{1}$$

$$\frac{2^3}{2^3} = \frac{\cancel{2} \cdot \cancel{2} \cdot \cancel{2}}{\cancel{2} \cdot \cancel{2} \cdot \cancel{2}} = 1$$



$$\frac{2^3}{2^3} = 2^{3-3} = 2^0 = 1$$

- You will be working in groups today. 3-4 people per group.
- In your groups you will be working to come up with mathematical rules on your own!
- Each group will start with only one rule and once you complete that rule, show it to me and you may get the next rule.
- Everyone in the group will need their own copy of rules.
- Hang on to these, they will be helpful as we move further into the unit!

Level 1

Level 2

Level 3

Answer

Answer

Answer