Power of a Power

**Number**

**Unit 3 Line Master 7**

Write as a single power.

1. $(5^{3})^{2}=5^{}$
2. $(2^{3})^{4}$
3. $\left(3^{4}\right)^{6}$
4. $\left(1^{3}\right)^{13}$
5. $\left(15^{9}\right)^{0}$
6. $\left(2^{-3}\right)^{3}$
7. $\left(1^{-3}\right)^{2}$
8. $\left(-4^{3}\right)^{5}$
9. $\left(3^{-5}\right)^{4}$
10. $\left(2^{-3}\right)^{-1}$
11. $\left(3^{-4}\right)^{-3}$
12. $(2^{3})^{3}(2^{9})$
13. $(2^{3}×2^{9})^{2}$
14. $(2y^{4})^{7}$
15. $(a^{m})^{n}$

What do you notice? What do you wonder?

Do you have any conjectures?