Do Your Self

1. When simplify, $\left\{\left(\frac{2}{3}\right)^2\right\}^3 \times \left(\left(\frac{1}{3}\right)^2\right)^{-2} \times (3)^{-1} \times \frac{1}{6}$ becomes: ...

2. Reduce to lowest term, $\frac{a^2-b^2}{ab} - \frac{ab-b^2}{ab-a^2}$ is equal to ....

3. When simplify, $(x^{-1} + y^{-1})^{-1}$ is equal to ....

4. The value of $x + x(x^x)$ when x = 2 is ....

5. The value of $(3^2)^3 + \left(\left(\frac{2}{3}\right)^{-2}\right)^2 + 3^5$ is ....

6. $\left(16^{\frac{5}{2}} \div 16^{\frac{1}{2}}\right) - 16^0$ = ...

7. $4^{\frac{-3}{2}} \div 8^{\frac{5}{2}}$ = ...

8. By what number should $(-3/5)^{-3}$ be divided so that the quotient may be $(9/25)^{-2}$?

9. Prove that $\left(\frac{x^m}{x^n}\right)^{m+n} \times \left(\frac{x^n}{x^p}\right)^{n+p} \times \left(\frac{x^p}{x^m}\right)^{p+m} = 1$

10. Find the value of x

   $6^{2x+1} / 216 = 1296$