Index Law 1: Multiplying Powers (Same Base)

(Add the indices)

1. $3^4 \times 3^2$
   $= 3^{4+1}$
   $= 3$
2. $7^5 \times 7^3$
   $= 7$
   $= 7$
3. $x^6 \times x^2$
   $= x$
   $= x$
4. $a^3 \times a^8$
   $= a$
   $= a$
5. $10^4 \times 10^1$
   $= 10$
   $= 10$
   $=$

Index Law 2: Dividing Powers (Same Base)

(Subtract the indices)

1. $9^7 \div 9^2$
   $= 9^{7-2}$
   $= 9^5$
2. $5^6 \div 5^4$
   $= 5$
   $= 5$ $=$
   $=$
3. $m^9 \div m^3$
   $= m$
   $= m$
4. $b^{10} \div b^6$
   $= b$
   $= b$
5. $12^5 \div 12^2$
   $= 12$
   $= 12$

Index Law 3: Power of a Power

(Multiply the indices)

1. $(4^3)^2$
   $= 4$
   $= 4$
2. $(x^5)^4$
   $= x$
   $= x^0$
3. $(7^2)^3$
   $= 7$
   $= 7$
4. $(a^6)^2$
   $= a$
   $= a$
5. $(m^3)^5$
   $= m$
   $= m$

Zero Power Law

(Any non-zero base raised to the power of zero equals 1)

1. $5^0 =$
2. $12^0 =$
3. $x^0 =$
4. $(3a)^0 =$
5. $\left(\frac{7}{2}\right)^0 =$