

# Mr. Ward Answer Key

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2.  $6^{-2} = \frac{1}{6^2} = \boxed{\frac{1}{36}}$     3.  $3^0 = \boxed{1}$     4.  $-5^{-2} = -\frac{1}{5^2} = \boxed{-\frac{1}{25}}$

5.  $3^{-3} = \frac{1}{3^3} = \boxed{\frac{1}{27}}$     6.  $1^{-8} = \frac{1}{1^8} = \boxed{1}$     7.  $-8^{-3} = -\frac{1}{8^3} = \boxed{-\frac{1}{512}}$

8.  $10^{-2} = \frac{1}{10^2} = \boxed{\frac{1}{100}}$     9.  $(4.2)^0 = \boxed{1}$     10.  $(-3)^{-3} = \frac{1}{(-3)^3} = \boxed{\frac{1}{-27}}$

11.  $4^{-2} = \frac{1}{4^2} = \boxed{\frac{1}{16}}$     12.  $(-3)^{-2} = \frac{1}{(-3)^2} = \boxed{\frac{1}{9}}$     13.  $4^{-4} = \frac{1}{4^4} = \boxed{\frac{1}{256}}$

14.  $2^{-5} = \frac{1}{2^5} = \boxed{\frac{1}{32}}$     15.  $2(-4)^{-3} = \frac{2}{(-4)^3} = \frac{2}{-64} = \boxed{\frac{1}{-32}}$

16.  $\boxed{4}$     17.  $\boxed{\frac{3}{k^4}}$     18.  $\boxed{7r^7}$     19.  $\boxed{x^{10}d^3}$

20.  $\boxed{\frac{2}{y^4}}$     21.  $\boxed{\frac{9^6}{f^4}}$     22.  $\boxed{c^4d^3}$     23.  $\boxed{\frac{p^7}{q}}$

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1.  $z^5$     2.  $5^6$     3.  $n^8$     4.  $x^3$

6.  $x^{10}$     7.  $y^{32}$     8.  $p^9$     9.  $3^{-4} = 1/3^4 = 1/81$

10.  $a^{-12} \cdot a^{14} = a^2$     11.  $xy \cdot x^6 \cdot y^{12} = x^7 y^{13}$

12.  $(zt)^5 = z^5 t^5 = 32t^5$     13.  $(6k)^2 = 36k^2$     14.  $(r^2s)^7 = r^{14} s^7$

15.  $(-2x^5)^3 = (-2)^3 x^{15} = -8x^{15}$     16.  $-(2x^5)^3 = -(2^3) x^{15} = -(8x^{15})$

17.  $(a^2b^2)^5 \cdot (a^{-5})^2$   
 $a^{10} b^{10} \cdot a^{-10} = b^{10}$

# Mr. Ward Answer Key

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1.  $5^2 = 25$

2.  $\frac{4^4}{2^7 \cdot 3} = \frac{256}{384} = \frac{2}{3}$

3.  $3$

4.  $a^2/b$

9.  $4/25$

10.  $\frac{x^6}{x^3 y^9} = \frac{x^3}{y^9}$

11.  $\left(\frac{a^3}{a^6 b^2}\right)^2 = \frac{a^{-6}}{a^{12} b^4} = \frac{1}{a^6 b^4}$

12.  $y^9$

13.  $16/9$

14.  $\frac{z^{-4} x^{-4}}{y^{-12}} = \frac{y^{12}}{16x^4}$

15.  $\frac{3}{2} \cdot \frac{3^{-2} a^{-2}}{2^{-2} b^{-2}}$

16.  $\frac{x^{-12}}{y^{-8}} = \frac{y^8}{x^{12}}$

$= \frac{3}{2} \cdot \frac{4b^2}{9a^2}$

$= \frac{2b^2}{3a^2}$