Introduction of Exponents

1. **Write the base and exponent.**

   A. 5^8

   B. 9^4

   C. $(-16)^7$

   D. $(-12)^{11}$

2. **Express in exponential form.**

   A. $5 \times 5 \times 5 \times 5 \times 5$

   B. $(-13) \times (-13) \times (-13) \times (-13) \times (-13) \times (-13) \times (-13)$

   C. $8 \times 8 \times 8 \times 8 \times 9 \times 9 \times 9 \times 2 \times 2 \times 5$

   D. -1331

   E. 1024

   F. $\frac{81}{256}$

3. **Express in product form:**

   A. 15^6

   B. $(-19)^3$

   C. $(11)^{11}$

4. **Find the value of**

   A. $(-33)^2$

   B. $(-1)^{89}$

   C. $(-5)^8$

   D. 2^9

   E. $(-9)^2 \times (-3)^5$

   F. $(-2)^7 \times 0 \times (-1)^{64}$

   G. $(-16)^2 \times (-2)^5$

   H. $(-1)^{111} \times (-1)^{63}$

5. **Which is greater?**

   A. 3^5 or 5^3

   B. 6^3 or 3^6

   C. 100^2 or 200^{100}

6. **To what power (–4) should be raised to get (–64)?**

7. **To what power (–5) should be raised to get 3125?**

8. **Write T for true and F for false statement.**

   A. $2^0 \times 0^1 = 0$

   B. $(-8)^6 = -2,62,144$

   C. $\left(\frac{-7}{15}\right)^{50} = \frac{-7^{50}}{-15^{50}}$

   D. The product form of 64 is $2 \times 2 \times 2 \times 2 \times 4$.

   E. The exponential form of $\frac{-5}{6} \times \frac{-5}{6} \times \frac{-5}{6} \times \frac{-5}{6} \times \frac{-5}{6} \times \frac{-5}{6}$ is $\left(\frac{5}{6}\right)^6$