Choose correct option in questions 1 to 4.

1. Find the value of $(-9)^3 \times (-4)^2$.
   a) -11664 b) 36
   c) 5   d) 25

2. Simplify: $7^x \times 7^2$
   a) 7^{x+3} b) 7^{x+2}
   c) 7^{2x} d) 7^{x-2}

3. Which is greatest among the following?
   a) 8^2 b) 4^3
   c) 2^8 d) 3^2

4. Find the value of $(6^0 - 2^0) \times (6^0 + 2^0)$.
   a) 2   b) 1
   c) 3   d) 0

5. In $(-9)^4$, the base is _____ and the exponent is 4.

6. $(-1)^4$ is equal to ____.

7. $(a^x)^y = $ _____

8. What should be added to $2y^2 - 4yz - 2z^2$ to get $y^2 - 2yz - z^2$.

9. Express the following numbers in the standard form.
   a) 5,223,000,000
   b) 256,000,000

10. Simplify and write the answer in exponential form.
    a) $3^7 \div 3^4$
    b) $5^8 \div 5^4$

CLASS –VII Mathematics (Exponents and Powers)
Answer key

1. a

2. b ; $\{ 7^x \times 7^2 = 7^{x+2}$ (when bases are same and there is a sign of multiplication in between then the exponents get added) $\}$

3. c ; $\{ 8^2 = 64 , 4^3 = 64, 2^8 = 256, 3^2 = 9 \}$

4. a; $\{ (6^0 - 2^0) \times (6^0 + 2^0) = (1 - 1) \times (1 + 1) = (0) \times (2) = 0$ (any base number with exponent 0 is equal to 1) $\}$

5. -9

6. 1

7. a^{xy} ; { in this case exponents will get multiplied }

8. $(y^2 - 2yz - z^2) - (2y^2 - 4yz - 2z^2)$
   $= y^2 - 2yz - z^2 - 2y^2 + 4yz + 2z^2$
   $= - y^2 + 2yz + z^2$

9. a. 5.223×10^9

   b) 2.56×10^8

10. a) 3^3 ; $\{ 3^{7-4}$ when the bases are same and there is a sign of division in between then the exonents get subtracted $\}$

    b) 5^4 ;$\{ 5^{8-4}$ when the bases are same and there is a sign of division in between then the exonents get subtracted $\}$