Algebraic Expressions and Identities: Worksheet -9

1. The degree of the polynomial $(2x^5 + 3x^4 + 2x^2 - 10x + 1)^3$ is   [   ]

   a) 23   b) 5   c) 10   d) 15

2. The degree of a polynomial f(x) is 'n' and degree of a monomial g(x) is

   'm' then degree of $\frac{f(x)}{g(x)}$ is   [   ]

   a) m – n   b) m + n   c) m/n   d) None of these

3. Degree of $(z^3-14)(z^3-1)$ [   ]

   a) 6   b)4   c) 12   d) 3

4. The degree of the polynomial f(x) is 6, the degree of the polynomial g(x)

   is 8, then degree of the polynomial f(x) + g(x) is   [   ]

   a) 6   b) 8   c) 14   d) 48

5. Which of the following is not a polynomial?   [   ]

   a) $\frac{6}{5}x^4 + \frac{3}{2}x^3 + 5x^2 + x + 1$ b) $5x^4 + 3x^3 + \frac{2}{x^2} + x - 2$

   c) $\sqrt{3}x^3 + x + \sqrt{5}$ d) 1

6. If m is a perfect square, the preceding perfect square is_____   [   ]

   a) $m - 2\sqrt{m} + 1$ b) $m^2 + 1$

   c) $m^2 + 2m + 1$ d) $m + 1$

7. If $a^n + a^{n+} \ldots\ldots +a^n$ (m times) $= a^{n+1}$ and $b^m + b^m + \ldots\ldots +b^m$ (n times)

   $= b^{m+1}$ then   [   ]

   a) m (n-1) = 1   b) n(m-1) = 1

   c) mn – ab = 1   d) mn – (ab – 1) =1

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8. $n^4 + 16 =$ [   ]

      a) $(n^2 + 4)(n^2 + 4)$ b) $(n^2 + \sqrt{2}\,n + 4)(n^2 - \sqrt{2}\,n + 4)$

      c) $(n^2 + 2n + 4)(n^2 - 2n + 4)$ d) $(n^2 + 2\sqrt{2}\,n + 4)(n^2 - 2\sqrt{2}\,n + 4)$

9. If x is a perfect square, the next perfect square is _____ [   ]

      a) $x + 1$ b) $x^2 + 1$ c) $x^2 + 2x + 1$ d) $x + 2\sqrt{x} + 1$