Factorization: Worksheet -7

1. When $x^2 + 6x + 8$ is divided by $x + 4$, then quotient is [ ]
   a) $x + 3$ b) $x + 2$ c) $x - 3$ d) $x^2 + 2$

2. If $(a + 2)(3a - 1) + 9$ is of the form; [divisor X quotient + rem] then dividend is [ ]
   a) $3a^2 + 9$ b) $3a^2 + 5a + 6$ c) $3a^2 + 5a + 5$ d) $3a^2 + 5a + 7$

3. The remainder when $x^3 + 3x^2 + 3x + 1$ is divided by $(x + 1)$ is [ ]
   a) -1 b) 1 c) 0 d) 2

4. If $x + y = 12$ and $xy = 14$ the $x^2 + y^2 =$ [ ]
   a) 144 b) 128 c) 116 d) 172

5. $\frac{5.27 \times 5.27 \times 5.27 - 3.27 \times 3.27 \times 3.27}{5.27 \times 5.27 + 5.27 \times 3.27 + 3.27 \times 3.27} =$ [ ]
   a) 2 b) 3 c) 4.5 d) 3.27

6. The L.C.M of $(16 - x^2)$ and $(x^2 + x - 6)$ is [ ]
   a) $(16 - x^2)(x - 3)(x + 2)$ b) $(16 - x^2)(x + 3)(x - 2)$
   c) $(16 - x^2)(x - 3)(x - 2)$ d) $(16 - x^2)(x + 3)(x + 2)$

7. If $25x^2 - 20x + k$ is a perfect square then k = [ ]
   a) 1 b) 2 c) 3 d) 4

8. $x^2 + 5x + 6 = (x + \_\_\_\_)(x + 3)$ [ ]
   a] 1 b] 2 c] 3 d] 4

9. $(x + a)(x + b) = x^2 + 3x + 2$, then a = _____, b = _____ [ ]
   a] 3, 2 b] 2, 1 c] – 2, 1 d] – 2, – 1

10. $(x - a)(x + 3) = x^2 - x + b$ then a = _____, b = _____ [ ]
    a] – 4, – 12 b] 4, – 12 c] – 4, 12 d] 4, 12