Quadratic Equations : Worksheet -7

1. The roots of a quadratic equation $x^2 + (m-2)x + 2 = 0$ are in the ratio of 1:2 then m = [ ]

   a) 4 b) – 1 c) 4 d) 5

2. If the roots of $px^2 + qx + r = 0$ are equal, then [ ]

   a) $q^2 = pr$ b) $p^2 = 4pq$ c) $q^2 = 4pr$ d) $r^2 = pq$

3. $\sqrt{6+\sqrt{6+\sqrt{6+.....}}}$ = [ ]

   a) 4 b) 3 c) – 2 d) 3.5

4. If one root of the equation $ax^2 + bx + c = 0$ is p times the other then [ ]

   a) $(1+p)^2ac = pb^2$ b) $pc^2 = (1+p)^2ab$

   c) $a^2p = (1+p)^2bc$ d) $(1+p)ac = p^2b^2$

5. The solution of the equation $7^{1+x} + 7^{1-x} = 50$ is [ ]

   a) 0 b) 2 c) ± 1 d) 3

6. If $\sqrt{6+\sqrt{6+\sqrt{x}}} = x$ then x = _____ [ ]

   a) 3 b) 2 c) – 2 d) no real x exists

7. If the roots of $x^2 - 5nx + 20 = 0$ are integers then positive value of 'n' is [ ]

   a) 5 b) 2 c) 1 d) none

8. The number of real roots of the equation $x + \sqrt{x-2} = 0$ is / are [ ]

a) 1 b) 2 c) 4 d) 0

9. $3x^2 - 6x + 3 = 0$will have two [ ]

a) real roots but unequal b) imaginary

c) equal d) all the above

10. If $2^{2x} + 2^{x+2} - 32 = 0$ then x = [ ]

a) 1 b) 2 c) -2 d) 3 e) None

11. If $x^2 + 5x + p$ and $x^2 + 4x + q$ have a common factor then $(p - q)^2$ = [ ]

a) 4p – 5q b) 5p – 4q c) 20 pq d) pq e) None