LAB SHEET # 7

1) The product of 7p^4q^3 and 5q^2 is:
   a) 35p^4q^6
   b) 35p^4q^5
   c) 12p^4q^5
   d) 12p^4q^6
   e) None of the above

2) The sum of −3t − 5s and 6t + 2s is:
   a) −3t + 3s
   b) −3t − 3s
   c) 3t + 3s
   d) 3t − 3s
   e) None of the above

3) Simplify: \((2p^2q^3)^3\)
   a) 2p^5q^6
   b) 2p^6q^9
   c) 6p^6q^6
   d) 8p^6q^6
   e) None of the above
4) David has $n$ nickels and $d$ dimes. If he has no other coins, what is the value in cents?
   a) $15n + 15d$
   b) $15nd$
   c) $10(n + d)$
   d) $5(n + d)$
   e) $5n + 10d$

5) Jane has $q$ quarters and $p$ pennies. If she has no other coins, what is the value in cents?
   a) $26q + 26p$
   b) $26pq$
   c) $25(p + q)$
   d) $p + q$
   e) $25q + p$

6) In a certain school, 3 out of 7 students are male. What is the total number of students in the school, if there are 420 male students?
   a) 20
   b) 180
   c) 540
   d) 980
   e) None of the above

7) If $7x - 7 = y$, then $x$ equals:
   a) $7y - 7$
   b) $y + 7$
   c) $\frac{y}{7} + 7$
   d) $\frac{y - 7}{7}$
   e) $\frac{y + 7}{7}$
8) Simplify: \(-6x(2x^2 - 6x + 1)\)
   a) \(-12x^3 + 36x + 1\)
   b) \(-12x^3 + 36x^2 + 1\)
   c) \(-12x^3 + 36x^2 - 6x\)
   d) \(-12x^3 + 30x\)
   e) None of the above

9) Simplify: \(-4ab(3a^2b - 2ab^2)\)
   a) \(-12a^3b^2 - 2ab^2\)
   b) \(-12a^3b + 8a^2b^2\)
   c) \(-12a^2b^2 + 8a^2b^3\)
   d) \(-12a^3b^2 + 8a^2b^2\)
   e) None of the above

10) The product of \(x + 4\) and \(x + 5\) is:
    a) \(x^2 + 20\)
    b) \(x^2 + 5x + 20\)
    c) \(x^2 + 4x + 20\)
    d) \(x^2 + 9x + 20\)
    e) None of the above

11) Simplify: \((4x - 7)(2x + 3)\)
    a) \(8x^2 - 21\)
    b) \(8x^2 + 10x - 21\)
    c) \(8x^2 - 14x - 21\)
    d) \(8x^2 + 12x - 21\)
    e) None of the above

12) Simplify: \((3x + 2)^2\)
    a) \(6x^2 + 4\)
    b) \(9x^2 + 4\)
    c) \(9x^2 + 6x + 4\)
    d) \(9x^2 + 12x + 4\)
    e) None of the above
13) Simplify: \(-6xy(4x^3 - 9x^2 + 5x)\)
   a) \(30x^3y - 30x^2y\)
   b) \(-24x^4y + 54x^3y + 5x\)
   c) \(-24x^4y + 54x^3y - 30x^2y\)
   d) \(-24x^4y - 54x^3y - 30x^2y\)
   e) None of the above

14) Simplify: \((x - 11)(x + 3)\)
   a) \(x^2 - 33\)
   b) \(x^2 - 11x - 33\)
   c) \(x^2 - 8x - 33\)
   d) \(x^2 + 3x - 33\)
   e) None of the above

15) Simplify: \((2x + 5)(3x - 8)\)
   a) \(6x^2 - 40\)
   b) \(6x^2 + 15x - 40\)
   c) \(6x^2 - 16x - 40\)
   d) \(6x^2 - x - 40\)
   e) None of the above

16) \((5x + 4)(5x - 4)\)
   a) \(25x^2 - 16\)
   b) \(25x^2 - 20x - 16\)
   c) \(25x^2 + 20x - 16\)
   d) \(5x^2 - 16\)
   e) None of the above

17) Simplify: \((5x + 4)^2\)
   a) \(25x^2 + 16\)
   b) \(25x^2 + 40x + 16\)
   c) \(25x^2 + 20x + 16\)
   d) \(65x^2 + 16\)
   e) None of the above
18) Simplify: \((2x + 3)(x^2 - 5x + 4)\)
   a) \(2x^3 + 3x^2 - 17x + 12\)  
   b) \(2x^3 - 7x^2 - 7x + 12\)  
   c) \(2x^3 - 20x + 4\)  
   d) \(2x^3 - 7x^2 - 7x + 4\)  
   e) None of the above

19) Factor: \(16x^2 - 24x\)
   a) \(x(16x - 24)\)  
   b) \(4x(4x - 6)\)  
   c) \(8x(2x - 3)\)  
   d) \(x(4x - 12)^2\)  
   e) None of the above

20) Factor: \(30x^2 - 35x\)
   a) \(-5x\)  
   b) \(x(30x - 35)\)  
   c) \(5x(6x - 7)\)  
   d) \(x(-5x)\)  
   e) None of the above

21) Factor: \(4x(x - 2) + 5(x - 2)\)
   a) \(4x^2 + 5x - 12\)  
   b) \(4x^2 - 3x - 12\)  
   c) \(4x^2 - 3x - 10\)  
   d) \((4x - 5)(x - 2)\)  
   e) None of the above

22) Factor: \(x^2 + 11x + 30\)
   a) \((x + 3)(x + 10)\)  
   b) \((x + 5)(x + 6)\)  
   c) \((x + 2)(x + 15)\)  
   d) \((x - 2)(x - 15)\)  
   e) None of the above
23) Factor: $x^2 - 2x - 15$
   a) $(x + 5)(x - 3)$
   b) $(x - 5)(x + 3)$
   c) $(x + 1)(x - 15)$
   d) $(x - 1)(x + 15)$
   e) None of the above

24) Factor: $x^2 - 7x - 18$
   a) $(x - 6)(x + 3)$
   b) $(x - 6)(x - 3)$
   c) $(x - 9)(x - 2)$
   d) $(x + 9)(x - 2)$
   e) None of the above

25) Factor: $x^2 + 10x + 24$
   a) $(x - 4)(x - 6)$
   b) $(x + 4)(x + 6)$
   c) $(x + 2)(x + 12)$
   d) $(x - 2)(x - 12)$
   e) None of the above
2) The sum of