CUNY Problem set #3 (To be used before Exam #3)

Math 020, College of Staten Island

Show all the work and circle the correct answer:

1) Simplify: (-7x^3y^2+ 4xy) – (3x^3y^2 + 2xy)

   a) -10$x^6y^4 + 6x^2y^2$ $b) -10x^3y^2 + 6xy$

   c) -4$x^6y^4 + 2x^2y^2$ d) -10$x^3y^2 + 2xy$

2) Simplify: (-5a^2 +3a -6) – (-4a^2 +2a -3)

   a) - $a^2 + a - 3$ b) -9a^4-a^2-3

   c) -9a^2+ 5 a -3 d) -9a^2+ a – 3

3) Simplify: $\frac{(2y)^3y^4}{(8y)^2}$

   a) $\frac{y^6}{8}$ b) $\frac{3y^5}{8}$ c) $8y^5$ d) $\frac{y^5}{8}$

4) Solve for all values of t: t^2= 144.

   a) t= $2\sqrt{6}$ b) t=0 or t=24 c) t= 12 or t= -12 d) t=$2\sqrt{6}$ or t= - $2\sqrt{6}$

5) Multiply: (4x-3) (2x^2 -5x -4)

   a) $8x^3 - 20\,x^2 - 16x + 12$ b) $8x^3 - 26\,x^2 - 31x + 12$

   c) $8x^3 - 26\,x^2 - x + 12$ d) $8x^2 - 5x + 12$

6) Expand: $(7x - 2)^2$

$a) 49x^2 - 28x + 4$ b) $49x^2 + 4$ c) $14x^2 + 4$ d) $49x^2 - 14x + 4$

7) Multiply: (3x +2) (4x^2 -2x -1)

   a) 12x^3+2x^2-7x -2 b) 12x^3-2x -2 c) 12x^3-14x^2-7x -2 d) 12x^3-10x -2

8) Simplify: $\frac{-24\,n^6+18n^5-6n^2}{6n^2}$

a)$-4n^3+3n^2$ b) $-4n^3+3n^2+1$ c) $-4n^4+3n^3-1$ d) $-24n^4+3n^2$

9) Which of the following is a factor of polynomial: 8 sx + 28 sy -6 tx -21 ty

a) 4s – 3t b) 2x-3y c) 2x+7t d) 4s+3t

10) Which of the following is a factor of polynomial: 15 xy -10 xq -6py +4pq

a) 5x+2p b) 3y-2q c) 5x-2q d) 3y+2q

11) Which of the following is a factor of polynomial: 4 x^2- 13 x + 10

a) x+5 b) 4x-2 c) 4x+5 d) x-2

12) Which of the following is a factor of polynomial: $6z^2$ +17z – 3

a) 6z +3 b) 6z+1 c) z+3 d) z-3

13)Factor completely: 24 s^2t -18 st -15t

a) t (24 s^2 -18s -15) b) 3t(4s-5)(2x-1)

c) st(24s-3) d) 3t(4s+5)(2s-1)

14)Factor Completely: 18 a^4 – 24 a^3b + 8 a^2b^2

a) 2a^2(3a-2b)(3a+2b) b) 2(9a^4-12a^3b +4a^2b^2)

c) 2a^2(9a^2-12 ab+4b^2) d) 2$a^2(3a-2b)^2$

15)Factor completely: $32\,x^3$y -18 xy^3

a) 2xy((4x+3y)(4x-3y)
b) 2xy$(4x-3y)^2$
c) 2x(16 x^2y-9y^3)
d) 2y(16x^3-9xy^2)