MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Determine whether the given equation is linear.

1) $4x + x^2 = 3$

    A) Linear   B) Not Linear

1) _____

2) $-7n + 3 = 8n + 2(n - 2)$

    A) Linear   B) Not Linear

2) _____

3) $8x + 5y = 9$

    A) Linear   B) Not Linear

3) _____

Solve.

4) $4z + 13 = 3z + 1$

    A) 12   B) 14   C) –12   D) –14

4) _____

5) $5p - 3 = 6p + 12$

    A) –16   B) –14   C) –15   D) 1

5) _____

6) $-15 = n - 6$

    A) 9   B) 21   C) –21   D) –9

6) _____

7) $-4x + 2 + 5x = 0$

    A) 2   B) no solution   C) –2   D) 3.5

7) _____

8) $-7b + 2 + 5b = -3b + 7$

    A) –2   B) 7   C) 5   D) –7

8) _____

9) $x + \dfrac{1}{3} = \dfrac{8}{9}$

    A) $\dfrac{7}{9}$ B) $\dfrac{5}{9}$ C) 5   D) $\dfrac{11}{9}$

9) _____

10) $3(2z - 4) = 5(z + 3) + z$

    A) 3   B) 27

    C) All real numbers   D) No solution

10) _____

11) $7y - 2(y - 9) = 7y - (3y + 12)$

    A) 30   B) –30   C) –6   D) 6

11) _____

12) $5.7p - 16 = 4.7p - 14$

    A) 3   B) –6   C) 2   D) 1

12) _____

13) $3(2z - 5) = 5(z - 3) + z$

    A) 0   B) 30

    C) All real numbers   D) No solution

13) _____

Translate into an equation, then solve.

14) Betsy has a balance of –$450 on her credit card. What payment should she make to get the balance to –$184?

    14) _____

    A) $-184 + x = -450$; A payment of $266 must be made.
    B) $-184 + x = -450$; A payment of $366 must be made.
    C) $-450 + x = -184$; A payment of $366 must be made.
    D) $-450 + x = -184$; A payment of $266 must be made.

15) Ken is to receive 670 cc of insulin in three injections. The first injection is to be 165 cc. The second injection is to be 240 cc. How much insulin must be given for the third injection?

    15) _____

    A) $165 - 240 + x = 670$; The third injection must be 265 cc.
    B) $165 + 240 + x = 670$; The third injection must be 745 cc.
    C) $165 - 240 + x = 670$; The third injection must be 745 cc.
    D) $165 + 240 + x = 670$; The third injection must be 265 cc.

1) B
2) A
3) A
4) C
5) C
6) D
7) C
8) C
9) B
10) D
11) B
12) C
13) C
14) D
15) D