Test 14

1) D

2) B

3) E
Y + (Y - 2) = 8 (5) + X = 8
2Y - 2 = 8, Y = 5 X = 3

4) E

5) A
Y + 5 = (-8Y + 2) (-1/3) + 5 = X
9Y = -3, Y = -1/3 X = 4 2/3

6) D

7) E

8) B
X = -Y + 8 X + (3) = 8
2(-Y + 8) - Y = 7 X = 5
-2Y + 16 - Y = 7
-3Y = -9, Y = 3

9) A
2X + (X + 2) = 14 Y = (4) + 2
3X + 2 = 14 Y = 6
3X = 12, X = 4

10) B
2X + (X - 1) = 2 Y - (1) = -1
3X - 1 = 2 Y = 0
3X = 3, X = 1

11) B
Y = 6(2Y + 3) + 4 X = 2(-2) + 3
Y = 12Y + 18 + 4 X = -4 + 3
-11Y = 22, Y = -2 X = -1

12) E
470 ÷ 55 = 8.5 hours
6:00 am + 8.5 hrs. = 2:30 pm

13) D
470 ÷ 23.5 = 20 mpg

14) D
the numbers are squares of
consecutive counting numbers

15) C
check each value of X in the given equation

Test 15

1) D

2) C

3) B

4) E

5) C
X - 3Y = 6
X + 3Y = 12
2X = 18
X = 9

6) B
(9) - 3Y = 6, Y = 1

7) D

8) E
2X + 4Y = 13
-12X - 4Y = -8
-10X = 5
X = -1/2

9) A
2(-1/2) + 4Y = 13, Y = 3 1/2

10) A

11) C
X + 6Y = 12 (6) + 6Y = 12
3X - 6Y = 12 6Y = 6, Y = 1
4X = 24
X = 6

12) D
-3X - Y = 9 2(-12) + Y = 3
2X + Y = 3 -24 + Y = 3, Y = 27
-X = 12
X = -12

13) E

14) B
the numbers are squares of
consecutive counting numbers

15) D
check each value of X in the equations

Test 16

1) A

2) B
(N + D = 7) x (-10) ⇒ -10N - 10D = -70
(.05N + .10D = .50) x 100 ⇒ 5N + 10D = 50
-5N = -20
N = 4

3) A
(4) + D = 7, D = 3

4) D
(N + D = 13) x (-5) ⇒ -5N - 5D = -65
(.05N + .10D = 1.10) x 100 ⇒ 5N + 10D = 110
5D = 45
D = 9

5) A
N + (9) = 13, N = 4

6) D
(N + Q = 13) x (-5) ⇒ -5N - 5Q = -65
(.05N + .25Q = 1.85) x 100 ⇒ 5N + 25Q = 185
20Q = 120
Q = 6

7) E
N + 6 = 13, N = 7

8) A

9) B
(D + Q = 10) x (-25) ⇒ -25D - 25Q = -250
(.10D + .25Q = 2.05) x 100 ⇒ 10D + 25Q = 205
-15D = -45
D = 3

10) C
(3) + Q = 10, Q = 7

11) E
(A + B = 5) x (-30) ⇒ -30A - 30B = -150
(.30A + .75B = 2.40) x 100 ⇒ 30A + 75B = 240
45B = 90
B = 2

12) B
A + (2) = 5, A = 3

13) B

14) A
Y = 15X + 50
Y = 15(10) + 50, Y = 200

15) E
Y = 20X + 50
Y = 20(10) + 50, Y = 250

Test 17

1) B

2) C

3) C

4) D

5) C
6N - 2N - 2 = N + 2 + 5
N = 3

6) A
6N + 5(N + 2) + 3 (N + 2) = 10(N + 1) + 10
6N + 5N + 10 + 3N + 6 = 10N + 10 + 10
14N + 16 = 10N + 20, N = 1

7) B
(1) + 2 = 3

8) C
3N + (N + 2) + 2 = 3(N + 4)
3N + N + 2 + 2 = 3N + 12
4N + 4 = 3N + 12, N = 8

9) E
(8) + 2 = 10

10) D
10N + 10(N + 2) = 10(N + 4) + 10
10N + 10N + 20 = 10N + 40 + 10
20N + 20 = 10N + 50, N = 3
second integer = (3) + 2 = 5

11) A

12) A
3N - 2(N + 2) + 13 = -3 [N + (N + 4)]
3N - 2N - 4 + 13 = -3N - 3N - 12
N + 9 = -6N - 12, N = -3

13) C
(-3) + 2 + 2 = 1

14) C
4N + 2(N + 1) = 4(N + 2)
4N + 2N + 2 = 4N + 8
6N + 2 = 4N + 8, N = 3

15) C
(3) + 2 = 5