Algebra I EOC Practice #10

1. At the beginning of year 1, Judy deposits $250 in her savings account, which pays 7% interest compounded annually. She makes no other deposits or withdrawals. The amount in the account at the beginning of each year is shown in the table.

Judy's Account

Year, n	Amount in Account, A(n)
1	250
2	250(1.07)
3	$250(1.07)^2$
4	$250(1.07)^3$

Which function represents A(n), the amount in Judy's account at the beginning of the year n?

A. $A(n) = 250$
B. $A(n) = 250(1.07)^{n+1}$
C. $A(n) = 250(1.07)^n$
D. $A(n) = 250(1.07)^{n-1}$

2. Which function represents the linear pattern shown in the table?

x	f(x)
1	3
2	10
3	17
4	24

A. $f(x) = x + 2$
B. $f(x) = 3x$
C. $f(x) = 7x - 4$
D. $f(x) = 5x - 2$

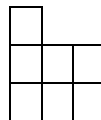3. The first 3 figures in a pattern are shown.

Figure 1   Figure 2   Figure 3
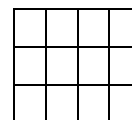
Which function represents f(n), the number of small squares in figure n?

A. $f(n) = n + 3$
B. $f(n) = n^2 + 3$
C. $f(n) = n + 4$
D. $f(n) = (n + 1)^2 + 2$

4. The total price for a t-shirt order is a function of the number of shirts ordered. The total cost based on the number of shirts ordered is shown in the table below.

T-Shirt Cost

Number of Shirts Ordered	Total Cost
50	$395.00
100	$745.00
150	$1,095.00
200	$1,445.00

Which function represents the total cost for a t-shirt order?

A. $f(x) = 4x - 5$
B. $f(x) = 6x + 145$
C. $f(x) = 4x + 195$
D. $f(x) = 7x + 45$