DO NOW

The table below shows the average yearly balance in a savings account where interest is compounded annually. No money is deposited or withdrawn after the initial amount is deposited.

Year	Balance, in Dollars
0	380.00
10	562.49
20	832.63
30	1232.49
40	1824.39
50	2700.54

Which type of function best models the given data?

(1) linear function with a negative rate of change

(2) linear function with a positive rate of change

(3) exponential decay function

(4) exponential growth function

May 30-6:56 PM

Regents Exam Format

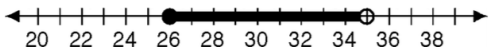
Part 1	24 Multiple Choice	2 points each
Part 2	8 Short Response	2 points each
Part 3	4 Short Response	4 points each
Part 4	1 Extended Response	6 points

86 total points

May 30-5:26 PM

1) C	2) A	3) C	4) D	5) B
6) B	7) A	8) C	9) B	10) D
11) A	12) C	13) D	14) D	15) D
16) A	17) B	18) D	19) B	20) A
21) C	22) D	23) A	24) C	25) D
26) B	27) A	28) C		

29) Line 1: distributive property; Line 2: commutative property

30) 

31) $3(x + 2)(x - 7)$

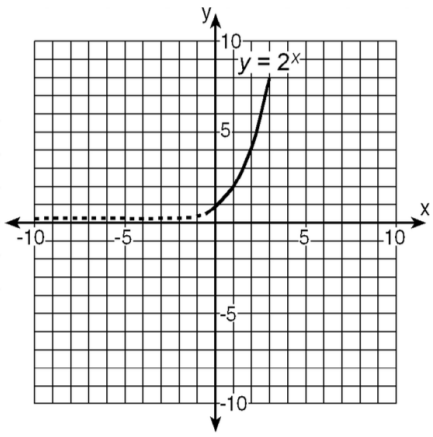
32) \$11,810
WORK SHOWN: $V(t) = C(1 - r)^t$, $V(t) = 30{,}000(1 - 0.11)^t$, $V(8) = 30{,}000(1 - 0.11)^8 = 11{,}809.76642 \approx 11{,}810$

33) 88 seats
WORK SHOWN: n = row number, $t_n = t_1 + (n - 1)d$, $t_{18} = 20 + (17)4$, $t_{18} = 88$

May 30-5:23 PM

34) (a)

x	2^x	y
-1		0.5
0		1
1		2
2		4
3		8

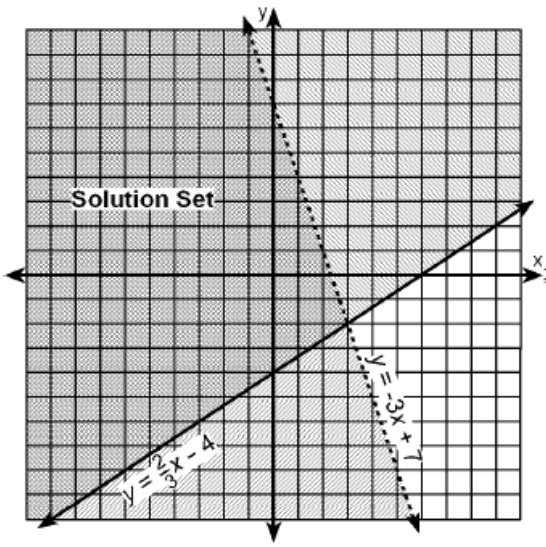


(b) No. The graph will get closer and closer, but never touch the x-axis because $y = 2^x$ will never equal 0.

35) $\frac{-3 \pm \sqrt{37}}{2}$

WORK SHOWN: $x^2 + 3x = 7$, $x^2 + 3x - 7 = 0$, $x = \frac{-3 \pm \sqrt{9 - 4(1)(-7)}}{2(1)} = \frac{-3 \pm \sqrt{9 + 28}}{2} = \frac{-3 \pm \sqrt{37}}{2}$

May 30-5:23 PM

36) (a) 

; (b) SAMPLE ANSWER: (0,0)

37) 12

May 31-8:47 AM