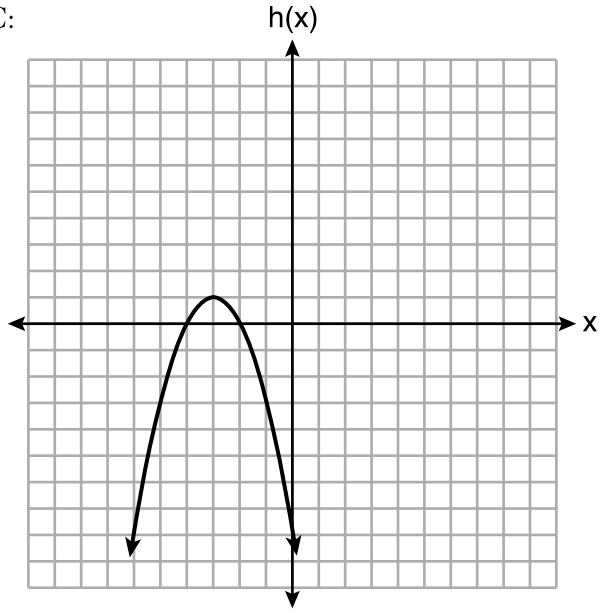
Use this space for computations.

14 Three functions are shown below.

A: $g(x) = -\frac{3}{2}x + 4$

B: $f(x) = (x + 2)(x + 6)$

C:



Which statement is true?

(1) B and C have the same zeros.

(2) A and B have the same y-intercept.

(3) B has a minimum and C has a maximum.

(4) C has a maximum and A has a minimum.

15 Nicci's sister is 7 years less than twice Nicci's age, a. The sum of Nicci's age and her sister's age is 41. Which equation represents this relationship?

(1) $a + (7 - 2a) = 41$

(2) $a + (2a - 7) = 41$

(3) $2a - 7 = 41$

(4) $a = 2a - 7$

Use this space for computations.

16 The population of a small town over four years is recorded in the chart below, where 2013 is represented by $x = 0$. [Population is rounded to the nearest person]

Year	2013	2014	2015	2016
Population	3810	3943	4081	4224

The population, $P(x)$, for these years can be modeled by the function $P(x) = ab^x$, where b is rounded to the nearest thousandth. Which statements about this function are true?

I. $a = 3810$

II. $a = 4224$

III. $b = 0.035$

IV. $b = 1.035$

(1) I and III

(2) I and IV

(3) II and III

(4) II and IV

17 When written in factored form, $4w^2 - 11w - 3$ is equivalent to

(1) $(2w + 1)(2w - 3)$

(2) $(2w - 1)(2w + 3)$

(3) $(4w + 1)(w - 3)$

(4) $(4w - 1)(w + 3)$

18 Which ordered pair does *not* represent a point on the graph of $y = 3x^2 - x + 7$?

(1) $(-1.5, 15.25)$

(2) $(0.5, 7.25)$

(3) $(1.25, 10.25)$

(4) $(2.5, 23.25)$

19 Given the following three sequences:

I. 2, 4, 6, 8, 10...

II. 2, 4, 8, 16, 32...

III. $a, a + 2, a + 4, a + 6, a + 8...$

Which ones are arithmetic sequences?

(1) I and II, only

(2) I and III, only

(3) II and III, only

(4) I, II, and III