6/5 CW

13 In a sequence, the first term is 4 and the common difference is 3. The fifth term of this sequence is

changes by 3

(1) -11

(2) -8

(3) 16

(4) 19

4, 7, 10, 13, 16

+3 +3 +3 +3

14 The growth of a certain organism can be modeled by $C(t) = 10(1.029)^{24t}$, where $C(t)$ is the total number of cells after t hours. Which function is approximately equivalent to $C(t)$?

(1) $C(t) = 240(.083)^{24t}$

(2) $C(t) = 10(.083)^{t}$

(3) $C(t) = 10(1.986)^{t}$

(4) $C(t) = 240(1.986)^{\frac{t}{24}}$

} type each into y= and see which table matches the one for $y_1 = 10(1.029)^{24t}$

Use this space for computations.

15 A public opinion poll was taken to explore the relationship between age and support for a candidate in an election. The results of the poll are summarized in the table below.

Age	For	Against	No Opinion
21–40	30	12	8
41–60	20	40	15
Over 60	25	35	15

whole = 30 + 12 + 8 = 50

What percent of the 21–40 age group was for the candidate?

(1) 15
(2) 25
(3) 40
(4) 60

part/whole = 30/50 = 0.6 × 100 = 60%

16 Which equation and ordered pair represent the correct vertex form and vertex for $j(x) = x^2 - 12x + 7$?

(1) $j(x) = (x - 6)^2 + 43$, (6,43)
(2) $j(x) = (x - 6)^2 + 43$, (−6,43)
(3) $j(x) = (x - 6)^2 - 29$, (6,−29)
(4) $j(x) = (x - 6)^2 - 29$, (−6,−29)

check graph in calc for vertex

vertex Form: $a(x-h)^2 + k$ (opp. / same)

(h, k)

17 A student invests $500 for 3 years in a savings account that earns 4% interest per year. No further deposits or withdrawals are made during this time. Which statement does *not* yield the correct balance in the account at the end of 3 years?

(1) $500(1.04)^3$
(2) $500(1 - .04)^3$
(3) $500(1 + .04)(1 + .04)(1 + .04)$
(4) $500 + 500(.04) + 520(.04) + 540.8(.04)$

exponential growth

$A = P(1+r)^t$

$A = 500(1 + 0.04)^3$
$= 500(1.04)^3$
$= 500(1.04)(1.04)(1.04)$

Use this space for computations.

18 The line represented by the equation $4y + 2x = 33.6$ shares a solution point with the line represented by the table below.

x	y
–5	3.2
–2	3.8
2	4.6
4	5
11	6.4

The solution for this system is

(1) $(-14.0, -1.4)$

(2) $(-6.8, 5.0)$

(3) $(1.9, 4.6)$

(4) $(6.0, 5.4)$

check answers: plug in x and y values into equation and see which one is true.