

Use this space for computations.

7 Which expression is equivalent to  $2(3g - 4) - (8g + 3)$ ?

- (1)  $-2g - 1$                       (3)  $-2g - 7$   
 (2)  $-2g - 5$                       (4)  $-2g - 11$

↳ can use calc trick like #1

OR

$$2(3g - 4) - (8g + 3)$$

$$6g - 8 - 8g - 3$$

$$-2g - 11$$

★ 8 In 2014, the cost to mail a letter was 49¢ for up to one ounce. Every additional ounce cost 21¢. Which recursive function could be used to determine the cost of a 3-ounce letter, in cents?

- (1)  $a_1 = 49; a_n = a_{n-1} + 21$  ← add 21  
 (2)  $a_1 = 0; a_n = 49a_{n-1} + 21$   
 (3)  $a_1 = 21; a_n = a_{n-1} + 49$   
 (4)  $a_1 = 0; a_n = 21a_{n-1} + 49$

initial value  
 $a_1 = 49$   
 ↑ means initial of 1st

★ 9 A car leaves Albany, NY, and travels west toward Buffalo, NY. The equation  $D = 280 - 59t$  can be used to represent the distance,  $D$ , from Buffalo after  $t$  hours. In this equation, the 59 represents the

- (1) car's distance from Albany  $\text{Distance} = D$   
 (2) speed of the car  
 (3) distance between Buffalo and Albany  
 (4) number of hours driving ←  $t$

$$D = 280 - 59t$$

↑ distance                      ↑ time

10 Faith wants to use the formula  $C(f) = \frac{5}{9}(f - 32)$  to convert degrees Fahrenheit,  $f$ , to degrees Celsius,  $C(f)$ . If Faith calculated  $C(68)$ , what would her result be?

- (1)  $20^\circ$  Celsius                      (3)  $154^\circ$  Celsius  
 (2)  $20^\circ$  Fahrenheit                      (4)  $154^\circ$  Fahrenheit

$$C(68) = \frac{5}{9}(68 - 32)$$

$$= \frac{5}{9}(36)$$

$$= 20$$

11 Which scenario represents exponential growth?  $\rightarrow$  multiply/divide computations.  
grows or decays rapidly

~~(1)~~ A water tank is filled at a rate of 2 gallons/minute. linear

~~(2)~~ A vine grows 6 inches every week. linear

(3) A species of fly doubles its population every month during the summer. multiplies (exponential)

~~(4)~~ A car increases its distance from a garage as it travels at a constant speed of 25 miles per hour. linear

12 What is the minimum value of the function  $y = |x + 3| - 2$ ?

(1) -2

(3) 3

(2) 2

(4) -3

X	Y
-6	1
-5	0
-4	-1
-3	-2
-2	-1
-1	0
0	1

vertex  $(-3, -2)$  minimum

\* 13 What type of relationship exists between the number of pages printed