Practice Test

Practice Test Page 246 Question 1

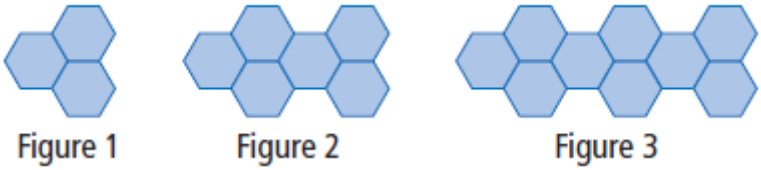
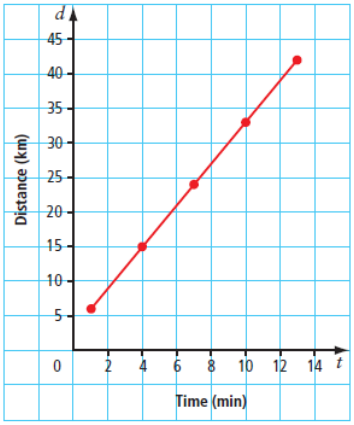


Figure 1 has 12 sides, Figure 2 has 20 sides, and Figure 3 has 28 sides. The correct choice is C.

Practice Test Page 246 Question 2

The number of sides, s, increases by 8 each time. Multiplying the figure number, f, by 8 results in an answer that is 4 less than the number of sides, s. The equation is $s = 8f + 4$. The correct choice is B.

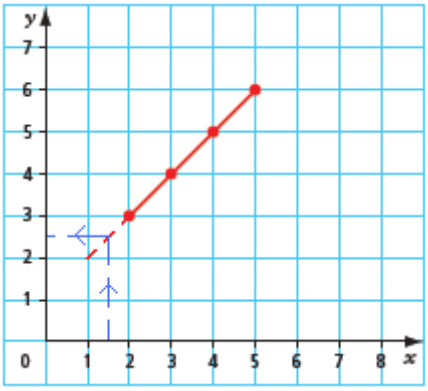
Practice Test Page 246 Question 3



t	d	Pattern	
		Multiply t by 3	Add 3 to Result
1	6	3	6
4	15	12	15
7	24	21	24
10	33	30	33
13	42	39	42

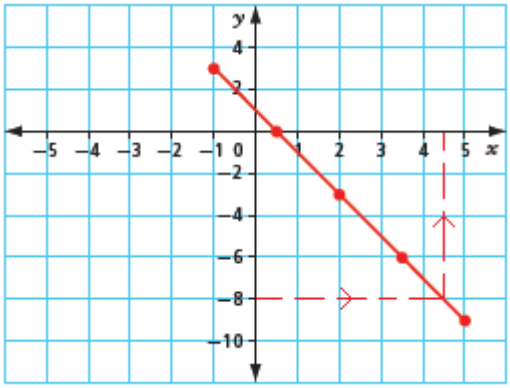
The graph is represented by the equation $d = 3t + 3$. The correct choice is C.

Practice Test Page 246 Question 4



From the graph, when $x = 1.5$, the approximate y-coordinate is 2.5.

Practice Test Page 246 Question 5



From the graph, when $y = -8$, the approximate x-coordinate is 4.5.

Practice Test Page 246 Question 6

a)

Term, n	Value, v
1	–2
2	–6
3	–10
4	–14
5	–18

b) Let v represent the value of a term and n represent the term number.

Term, n	Value, v	Pattern	
		Multiply n by –4	Add 2 to Result
1	–2	–4	–2
2	–6	–8	–6
3	–10	–12	–10
4	–14	–16	–14
5	–18	–20	–18

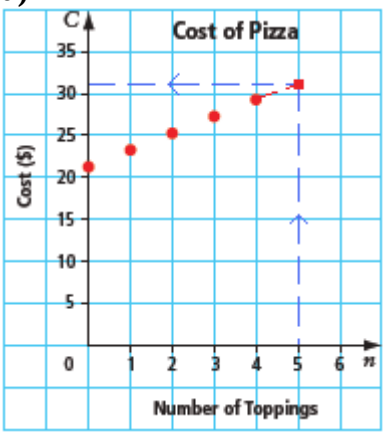
The equation $v = -4n + 2$ can be used to determine the numbers in the pattern.

Use term 5 to check:
Check:
Left Side = –18 Right Side = –4(5) + 2
= –20 + 2
= –18
Left Side = Right Side
The equation is correct.

c) Substitute $n = 11$ into the equation and solve for v.
$v = -4(11) + 2$
$= -44 + 2$
$= -42$
The 11th term has a value of –42.

Practice Test Page 247 Question 7

a)



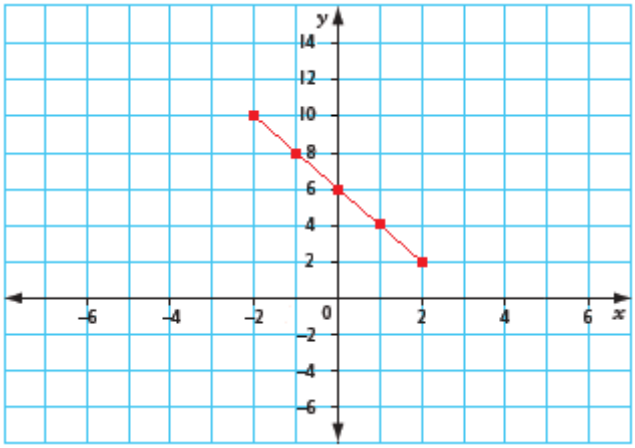
From the graph, a party pizza with five toppings costs approximately $31.

b) It is not reasonable to interpolate values on this graph because you cannot add a fraction of a topping for a fraction of the price.

Practice Test Page 247 Question 8

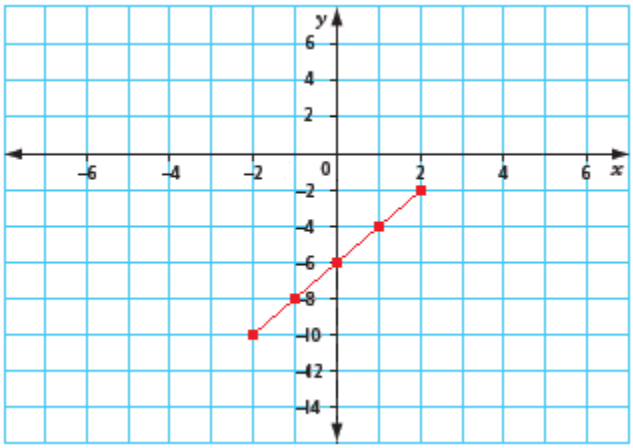
a)

x	*y*
–2	10
–1	8
0	6
1	4
2	2



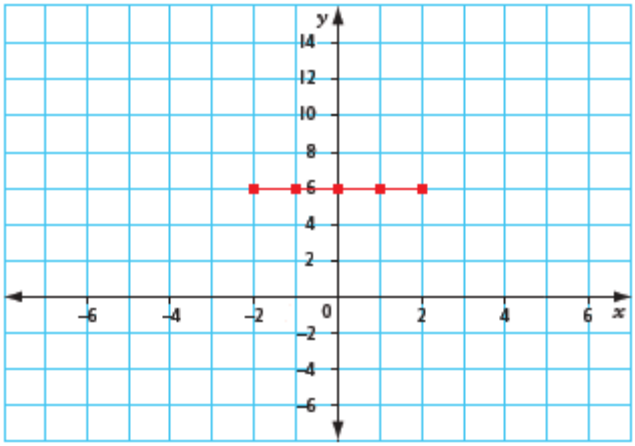
b)

x	*y*
–2	–10
–1	–8
0	–6
1	–4
2	–2



c)

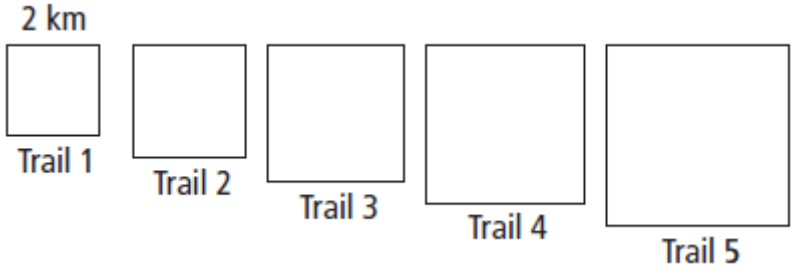
x	*y*
–2	6
–1	6
0	6
1	6
2	6



Practice Test Page 247 Question 9

Example: The graphs in parts a) and b) are symmetrical about the *y*-axis. The graphs in parts a) and c) have the same *y*-intercept.

Practice Test Page 247 Question 10



a)

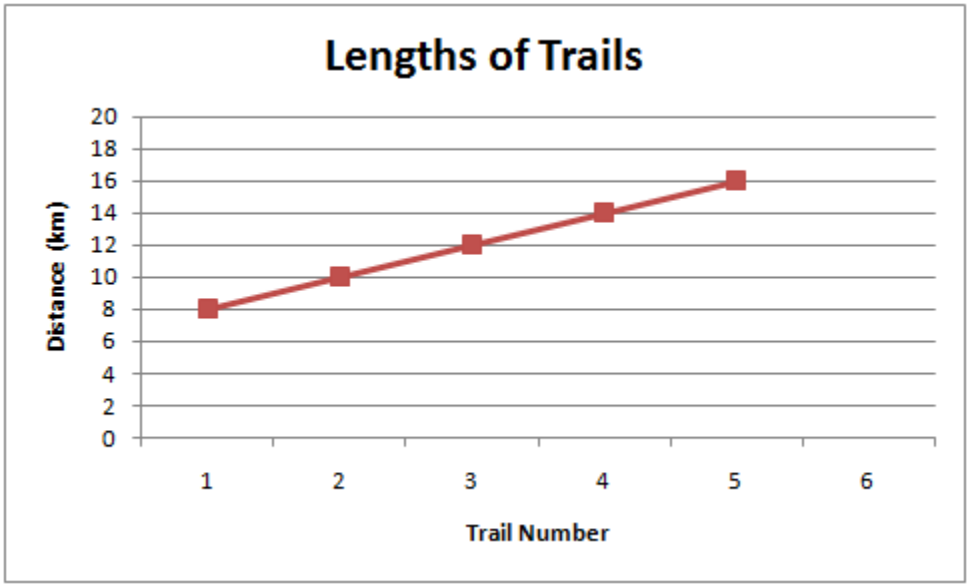
Trail Number, *n*	Distance, *d* (km)
1	8
2	10
3	12
4	14
5	16

b)

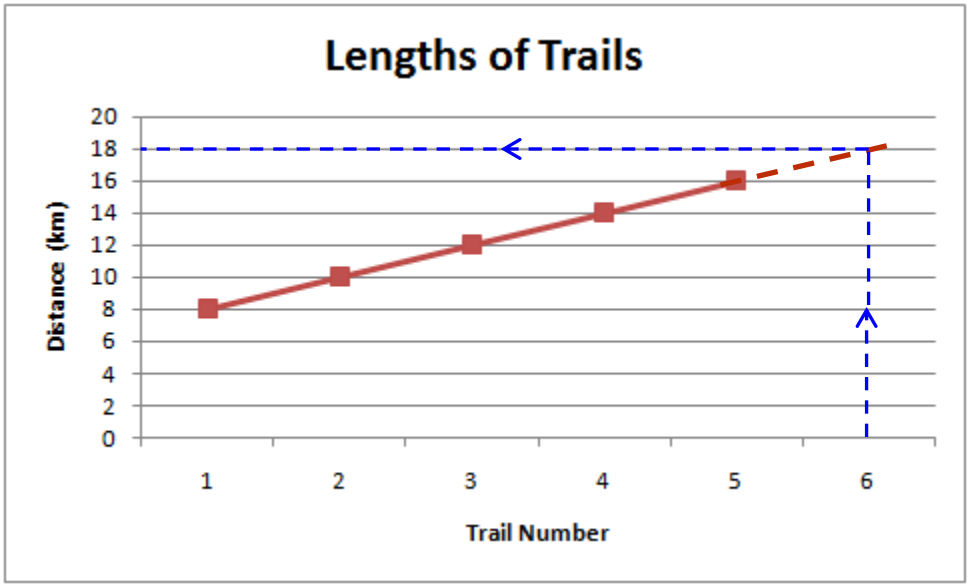
Trail Number, *n*	Distance, *d* (km)	Pattern	
		Multiply *n* by 2	Add 6 to Result
1	8	2	8
2	10	4	10
3	12	6	12
4	14	8	14
5	16	10	16

The equation that represents the relationship between the trial number, *n*, and the distance, *d*, is $d = 2n + 6$.

c)



d)



From the graph, the total distance of a sixth trail would be approximately 18 km.