Warm-Up

A landscape designer uses wooden boards as edging for the plots in a herb garden.

plots [p]	#boards [b]
1	4
2	7
3	10
4	13

+3 +3 +3

A) Write an equation to show how to calculate the number of boards?

$b = 3p + 1$

B) Describe the relationship

As p increases by 1, b increases by 3

c) If you have 24 plots how many boards are used?

$p = 24$

$b = 3p + 1$

$b = 3(24) + 1$

$b = 72 + 1$

$b = 73$

7. The pattern in this table continues. Which expression below represents the number of squares in terms of the figure number?

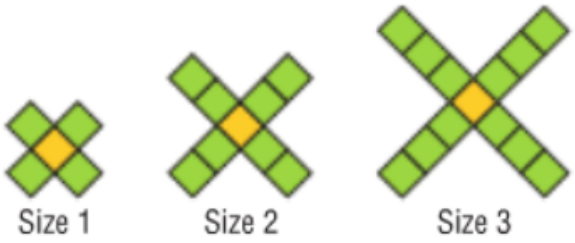
Figure, *f*	Number of Squares, *s*
1	6
2	7
3	8
4	9
5	10

+1 +1 +1 +1

$s = 1f + 5$

a) $5f$ b) $2f$ c) $f + 5$ d) $s + 5$

8. This pattern of squares continues. Which equation below relates the number of squares, n, in a picture to the size number, s?



a) $n = s + 4$
b) $n = 4s$
c) $n = 4s + 1$
d) $s = 4n$

Size(s)	Squares(n)	
1	5	+4
2	9	+4
3	13	

$n = 4s + 1$

9. The pattern in this table continues. Which equation below relates the number of squares to the figure number?

Figure, f	Number of Squares, s
1	5
2	7
3	9
4	11
5	13

+2
+2
+2
+2

$S = 2f + 3$

a) $s = 4f + 1$

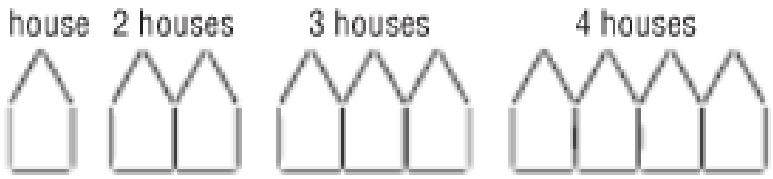
b) $s = 2f + 3$

c) $s = f + 2$

d) $f = 2s + 3$

Here is a pattern made with toothpicks.
The pattern continues.

#10 pg 159 Diagram



A. Make a table of values.

B. Write an equation that relates the number of houses to the number of toothpicks!

$t = 4h + 1$

(h) # houses	(t) # toothpicks	
1	5	+4
2	9	+4
3	13	+4
4	17	

What is the number of toothpicks needed for 156 houses?

$h = 156$

$t = 4h + 1$
$t = 4(156) + 1$
$t = 624 + 1$
$t = 625$

D. If you used 45 toothpicks how many houses do you have?

$t = 45$

$t = 4h + 1$
$45 = 4h + 1$
$4h + 1 = 45$
$4h + 1 - 1 = 45 - 1$
$\frac{4h}{4} = \frac{44}{4}$
$h = 11$

Bob's taxi had a sign that read

Fixed cost $3.60
+
$1.50 per kilometre

A. Write an equation that relates the cost to the distance travelled.

cost ← distance

$C = 3.60 + 1.50d$

B. What is the cost for an 11-km ride.

$C = 3.60 + 1.50d$
$C = 3.60 + 1.50(11)$
$C = 3.60 + 16.50$
$C = \$20.10$

A Math tutor charges $15.75 for each hour and a fixed cost of $8.00.

i) Write an equation that relates the cost to the hours hired

$C = 8.00 + 15.75h$

ii) How much will a tutor cost for 4 hours?

$C = 8.00 + 15.75(4)$

$C = 8.00 + 63$

$C = 71$

Write the equation given the following data table.

number of squares [n]	number of triangles [t]
1	4
2	6
3	8
4	10

+2 +2 +2

$t = 2n + 2$

Page 159-161

#11 * Draw the table

* show the common difference

* write the equation

12. a, c,d,e

14. a, b,c

15. a, b,c

16. a,b,

17. Make a table...[size.... number of stones]

19. ***Figure number with PERIMETER*** [count around the shape]

Figure number with AREA [count the blocks inside the shape]

Answers

pg 487-488