Warm-Up

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

1 plot 2 plots 3 plots 4 plots

# 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 increased by 1, b increases by 3.

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

$p = 24$

$b = 3p + 1$

$= 3(24) + 1$

$= 72 + 1$

$= 73$

BEDMAS

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

Expression

$1f + 5$

$f + 5$

Equation

$s = 1f + 5$

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

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

Size 1 Size 2 Size 3

a) $n = s + 4$ b) $n = 4s$

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

Size # (s)	# of squares (n)	
1	5	+4
2	9	+4
3	13	

$n = 4s + 1$

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

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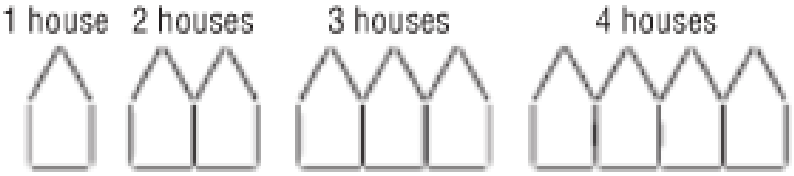
Diagram



A. Make a table of values.

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

# houses [h]	# toothpicks [t]
1	5
2	9
3	13
4	17

+4 +4 +4

$t = 4h + 1$

What is the number of toothpicks needed for 156 houses?

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

BEDMAS

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

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

Solving equations

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.

Let statement for both variables

Let "C" represent cost
Let "d" represent distance

$C = 3.60 + 1.50d$

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

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

order of operations

C) If I have $32.00 how far can I go?

Equations

$C = 3.60 + 1.50d$

$32 = 3.60 + 1.50d$

$-3.60 \quad -3.60$

$3.60 + 1.50d = 32$

$\frac{1.50d}{1.50} = \frac{28.40}{1.50}$

$d = 18.93$ km

#4, 5, 6 from yesterday

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#11 * Draw the table

* show the common difference

* write the equation

Answers

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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]