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

common difference

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

$b = 3p + 1$

B) Describe the relationship

As p increase by 1, b increase by 3.

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

$b = 3p + 1$

$b = 3(24) + 1$

$b = 72 + 1$

$b = 73$

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

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

$s = 1f + 5$

$1f + 5$

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

$s = 2f + 3$

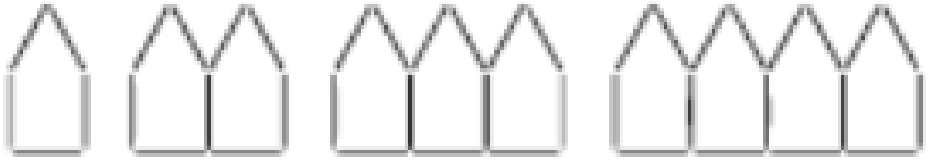
a) $s = 4f + 1$

b) $s = 2f + 3$

c) $s = f + 2$

d) $f = 2s + 3$

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



Picture page 159 #10

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

A. Make a table of values.

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

$t = 4h + 1$

What is the number of toothpicks needed for 156 houses?

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

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

$t = 4h + 1$
$45 = 4h + 1$

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

Bob's taxi had a sign that read

Fixed cost $3.60
+
$1.50 per kilometre

Let "d" represent distance

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

$C = 3.60 + 1.50d$

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

$C = 3.60 + 1.5d$

$C = 3.60 + 1.5(11)$

$C = 3.60 + 16.50$

$C = 20.10$

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

Let "h" represent hours

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

$C = 15.75h + 8$ $C = 8 + 15.75h$

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

$C = 15.75h + 8$

$C = 15.75(4) + 8$

$C = 63 + 8$

$C = 71$

1 & 2 Worksheet

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