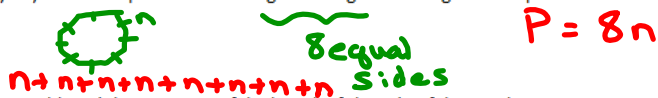


4) a) Write the perimeter of a regular octagon as an algebraic expression if each side has a length of "n".



b) Find the perimeter if the length of the side of the regular octagon is 6 cm.

$P = 8(6\text{cm})$
 $P = 48\text{cm}$

5) Ted is having a party. The cost to rent the hall is \$25 and the cost for food is \$10 per person.

a. Create a chart that relates the number people to the total cost.

# of people (p)	1	2	3	4	5	6
Total Cost	35	45	55	65	75	85

1 person: $10 + 25 = 35$
 2 people: $2(10) + 25 = 45$
 3 people: $3(10) + 25 = 55$
 4 people: $4(10) + 25 = 65$
 5 people: $5(10) + 25 = 75$
 6 people: $6(10) + 25 = 85$

b. Write out the relations as an algebraic expression.

$10p + 25$

c. Write the relation in words.

As the # of people increases by 1, the cost increases by \$10.

d. What is the total cost when 90 people are invited? (Show work)

$10(90) + 25 = 925$ is the cost to invite 90 people.

e. What is the total cost when 25 people are invited? (Show work)

$10(25) + 25 = 275$ to invite 25 people

f. What is the new expression if the cost of food doubles?

$20p + 25$

6) SIMPLIFY then evaluate each of the following: (MUST COLLECT LIKE TERMS FIRST)

a) $4t + 7p - 2p - 6t - t + 5$; $p = 2$ & $t = 7$

$4t + 6t - t + 7p - 2p + 5$
 $9t + 5p + 5$
 $9(7) + 5(2) + 5$
 $63 + 10 + 5 = 78$

b) $5ab + 6b - 10 + 6b$; $a = 2$ & $b = 5$

$5ab + 6b + 6b - 10$
 $5ab + 12b - 10$
 $5(2)(5) + 12(5) - 10$
 $50 + 60 - 10 = 100$

c) $5r + 6w + 7r + 2w - 4r$; $r = 3$ & $w = 2$

$5r + 7r - 4r + 6w + 2w$
 $8r + 8w$
 $8(3) + 8(2)$
 $24 + 16 = 40$

7) Write an algebraic expression for each of the following. (Remember to define your letter for the variable)

a) Product of 14 and a number.

means multiply $14n$

let $n =$ a number

b) A number subtract from 26

$26 - n$

c) A number increased by 3

$n + 3$

d) Triple a number plus 21

$3n + 21$

e) A number reduced by 8

$n - 8$

f) 31 subtract a number

$31 - n$

8) Write the expression as words

a. $d - 11$

a number minus 11

b. $100 - b$

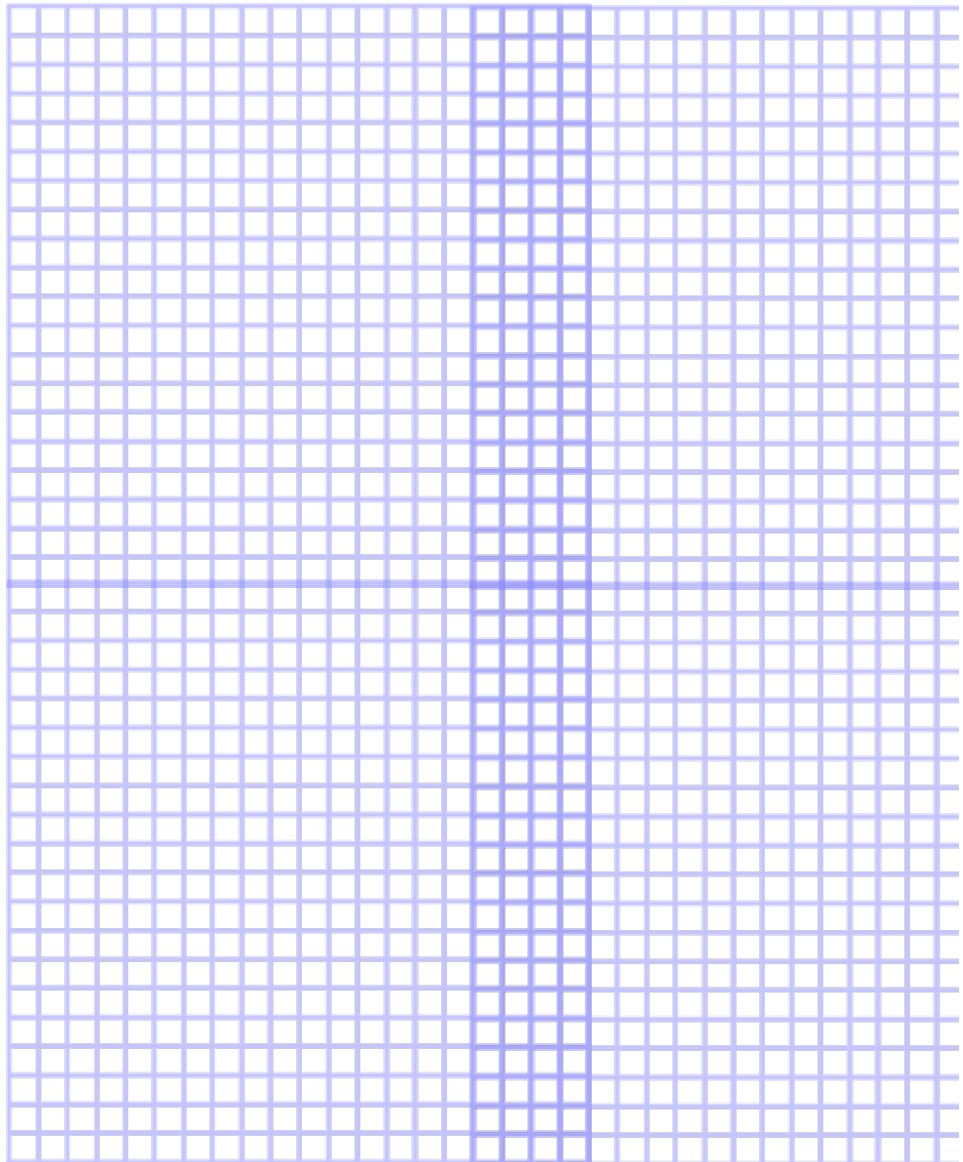
100 subtract a number or a number subtracted from 100.

c. $3n + 6$

triple a number increased by 6.

i) a)

Input f	Output f + 14
1	+14 15
2	+14 16
3	+14 17
4	18
5	19



9b)

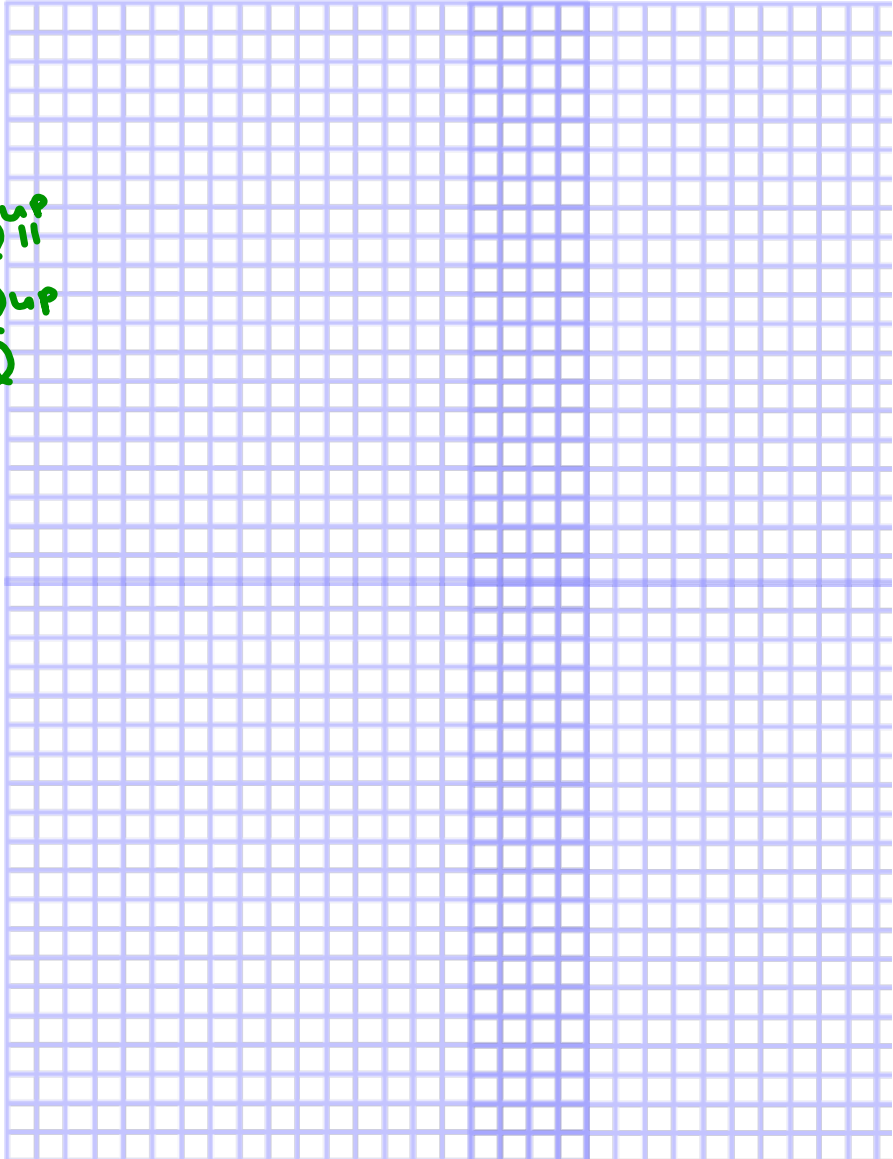
$$\begin{array}{r} 11(1)-1 \\ 11-1 \\ \hline 10 \end{array}$$

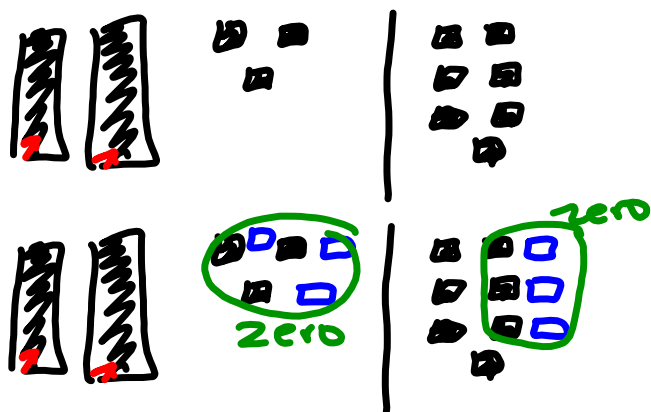
$$\begin{array}{r} 11(2)-1 \\ 22-1 \\ \hline 21 \end{array}$$

$$\begin{array}{r} 11(3)-1 \\ 33-1 \\ \hline 32 \end{array}$$

Input k	Output $11k - 1$
1	10
2	21
3	32
4	43
5	54

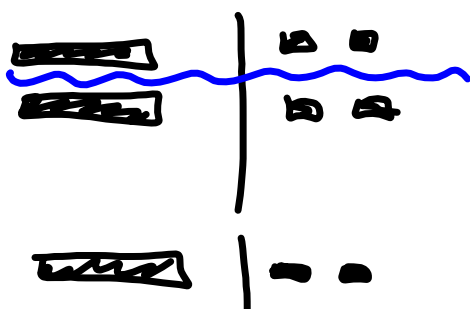
Handwritten green annotations: "up" and "11" with arrows pointing to the output values in the table.





$$2x + 3 = 7$$

$$2x + 3 - 3 = 7 - 3$$



$$2x = 4$$

$$\div 2 \quad \div 2$$

$$x = 2$$

Attachments

Grade 7 Unit 1 Shee 13.docx