

Grade 7

Warm Up
Nov. 7, 2022



1) Karen gets paid \$7 for just getting called to baby sit. On top of that Karen receives \$5 per hour for babysitting.

h	Earning
→ 0	7
→ 1	12
→ 2	17
3	22
4	27
5	32
6	37
7	42

$5h + 7$

a) Fill in the chart that relates hours to Karen's total earning.

b) Write the relation in algebraic form: $5h + 7$

$$\left. \begin{array}{l} h=0 \\ 5(0) + 7 \\ 0 + 7 \\ 7 \end{array} \right\} \left. \begin{array}{l} h=1 \\ 5(1) + 7 \\ 5 + 7 \\ 12 \end{array} \right\} \left. \begin{array}{l} h=2 \\ 5(2) + 7 \\ 10 + 7 \\ 17 \end{array} \right\} = 17$$

c) Graph the relation below (Label the graph)

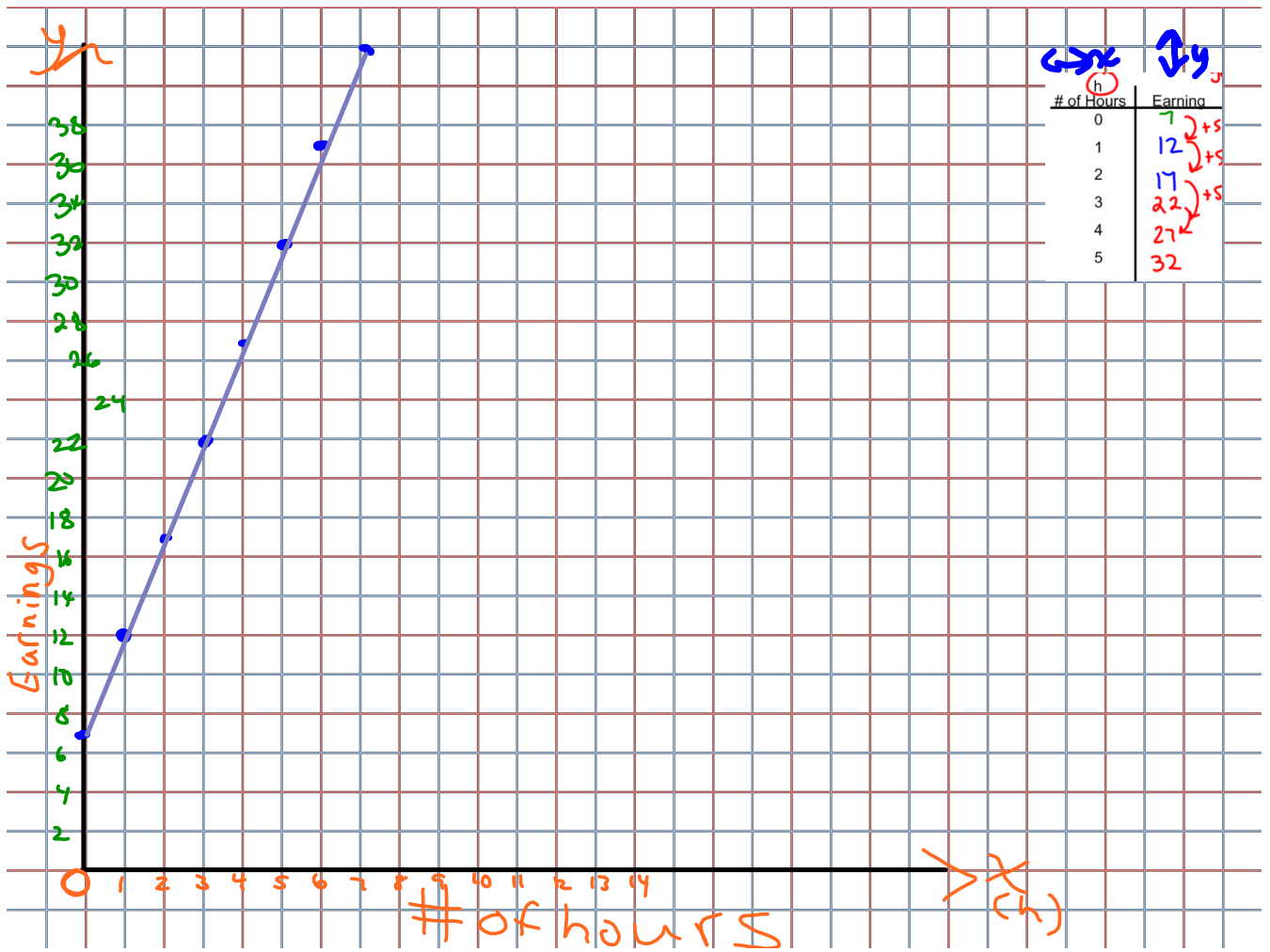
d) How much does she have to work to get paid \$42?
(Hint: Extend your graph)

She has to work 7 hours.

e) How much does she earn if she works 10 hours?
(SHOW WORK)

$$\begin{array}{r} 5h + 7 \\ \downarrow \\ 5(10) + 7 \\ \underline{50} + 7 \\ 57 \end{array}$$

She gets paid \$57 for working 10 hours.



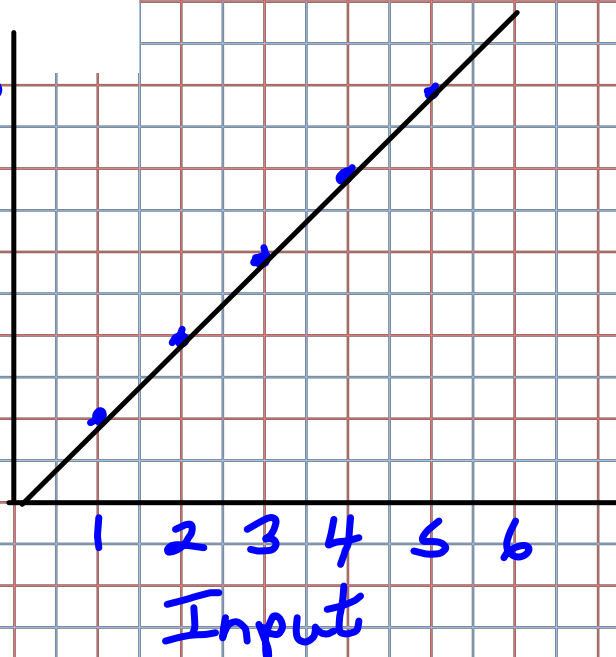
1. Copy and complete this Input/Output table for each relation.
- a) $4n$ is related to n .
 - b) $x + 3$ is related to x .
 - c) $4c + 6$ is related to c .

a)

Input	Output
n	$4n$
1	4
2	8
3	12
4	16
5	20

20)
20
16
12
8
4
0

output



Bill earn \$4/hr,
Total earnings $4n$

$n=1$
 $4(n)$
 $4(1)$
4

$n=2$
 $4(n)$
 $4(2)$
8

$n=3$
 $4(n)$
 $4(3)$
12

Homework
Solutions

2.

Homework
Solutions

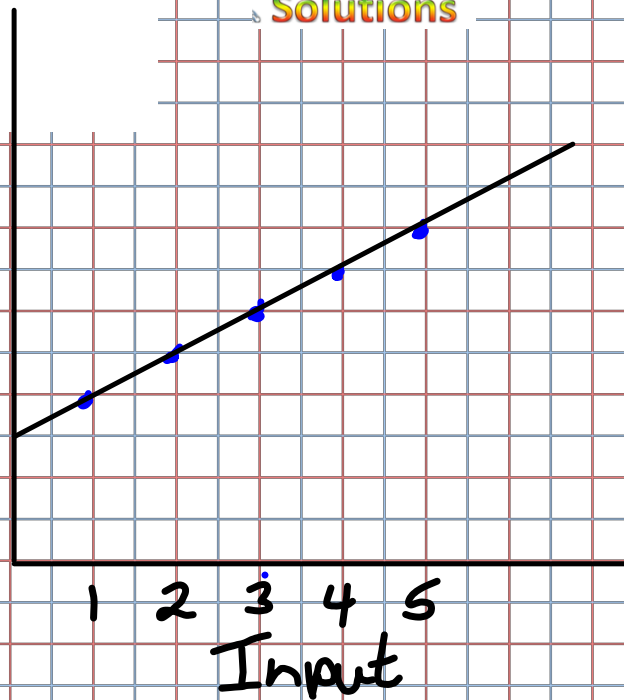
1. Copy and complete this Input/Output table for each relation.

- a) $4n$ is related to n .
- b) $x + 3$ is related to x .
- c) $4c + 6$ is related to c .

b)

Input n	Output $x+3$
1	4
2	5
3	6
4	7
5	8

output 8
6
4
2



The number of cookies on the plate if there is 3 more yesterday

$$(x) + 3$$

$$\begin{array}{l} x = 1 \\ (1) + 3 \\ 4 \end{array}$$

$$\begin{array}{l} x = 2 \\ (2) + 3 \\ 5 \end{array}$$

$$\begin{array}{l} x = 3 \\ (3) + 3 \\ 6 \end{array}$$

$$4c + 6$$

$$c = 1$$

$$4(1) + 1$$

$$4 + 1$$

$$5$$

In	Out
1	5
2	9
3	13
4	17
5	21

$2 + 4$

$$c = 2$$

$$4(2) + 1$$

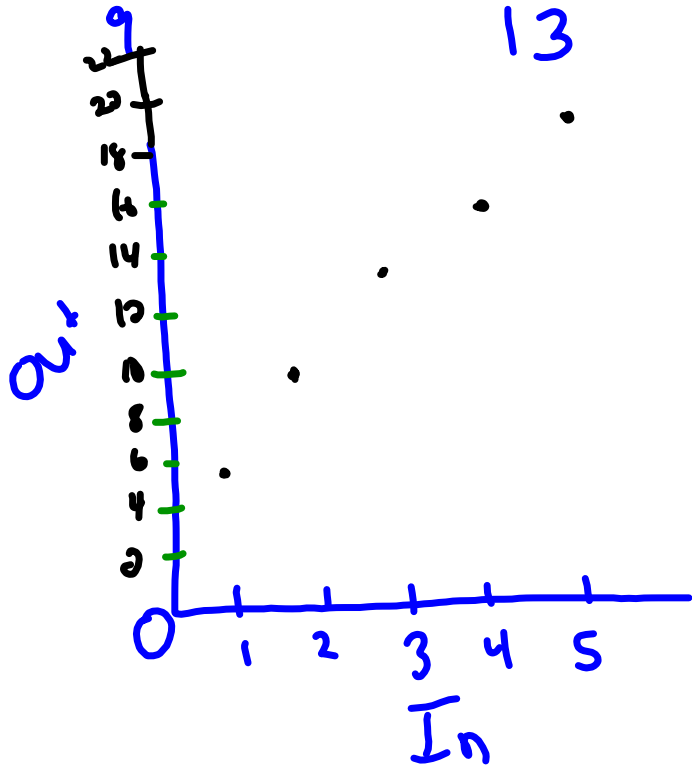
$$8 + 1$$

$$c = 3$$

$$4(3) + 1$$

$$12 + 1$$

$$13$$



Class / Homework

Homework pg. 33 -34

#5

#6 (For # 6, draw Input/output tables and write a relation)

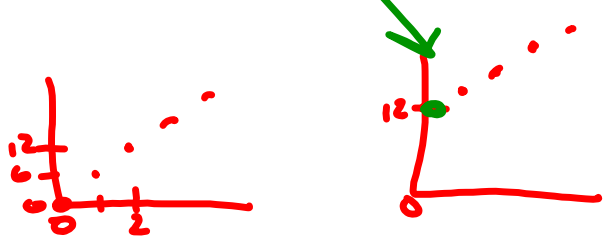
#7 $\rightarrow 75 - 5n$

#6) Start input is zero

a)

In	out
0	12
1	15
2	18
3	21
4	24
5	27
6	30

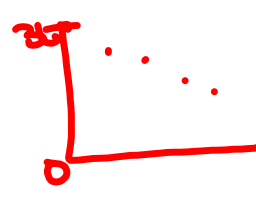
2×3
 $2 \times 4 = 3$
 $2 \times 5 = 3$
 $2 \times 6 = 3$
 $2 \times 7 = 3$
 $2 \times 8 = 3$
 $2 \times 9 = 3$
 $2 \times 10 = 3$
 $2 \times 11 = 3$
 $2 \times 12 = 3$
 $2 \times 13 = 3$
 $2 \times 14 = 3$
 $2 \times 15 = 3$
 $2 \times 16 = 3$
 $2 \times 17 = 3$
 $2 \times 18 = 3$
 $2 \times 19 = 3$
 $2 \times 20 = 3$
 $2 \times 21 = 3$
 $2 \times 22 = 3$
 $2 \times 23 = 3$
 $2 \times 24 = 3$
 $2 \times 25 = 3$
 $2 \times 26 = 3$
 $2 \times 27 = 3$
 $2 \times 28 = 3$
 $2 \times 29 = 3$
 $2 \times 30 = 3$
 $2 \times 31 = 3$
 $2 \times 32 = 3$
 $2 \times 33 = 3$
 $2 \times 34 = 3$
 $2 \times 35 = 3$
 $2 \times 36 = 3$
 $2 \times 37 = 3$
 $2 \times 38 = 3$
 $2 \times 39 = 3$
 $2 \times 40 = 3$
 $2 \times 41 = 3$
 $2 \times 42 = 3$
 $2 \times 43 = 3$
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 $2 \times 46 = 3$
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 $2 \times 50 = 3$
 $2 \times 51 = 3$
 $2 \times 52 = 3$
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 $2 \times 56 = 3$
 $2 \times 57 = 3$
 $2 \times 58 = 3$
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 $2 \times 68 = 3$
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 $2 \times 85 = 3$
 $2 \times 86 = 3$
 $2 \times 87 = 3$
 $2 \times 88 = 3$
 $2 \times 89 = 3$
 $2 \times 90 = 3$
 $2 \times 91 = 3$
 $2 \times 92 = 3$
 $2 \times 93 = 3$
 $2 \times 94 = 3$
 $2 \times 95 = 3$
 $2 \times 96 = 3$
 $2 \times 97 = 3$
 $2 \times 98 = 3$
 $2 \times 99 = 3$
 $2 \times 100 = 3$



b)

In	out
0	36
1	30
2	24
3	18
4	12
5	6
6	0

$6 \times 6 = 36$
 $6 \times 5 = 30$
 $6 \times 4 = 24$
 $6 \times 3 = 18$
 $6 \times 2 = 12$
 $6 \times 1 = 6$
 $6 \times 0 = 0$
 $6 \times 1 = 6$
 $6 \times 2 = 12$
 $6 \times 3 = 18$
 $6 \times 4 = 24$
 $6 \times 5 = 30$
 $6 \times 6 = 36$
 $6 \times 7 = 42$
 $6 \times 8 = 48$
 $6 \times 9 = 54$
 $6 \times 10 = 60$
 $6 \times 11 = 66$
 $6 \times 12 = 72$
 $6 \times 13 = 78$
 $6 \times 14 = 84$
 $6 \times 15 = 90$
 $6 \times 16 = 96$
 $6 \times 17 = 102$
 $6 \times 18 = 108$
 $6 \times 19 = 114$
 $6 \times 20 = 120$
 $6 \times 21 = 126$
 $6 \times 22 = 132$
 $6 \times 23 = 138$
 $6 \times 24 = 144$
 $6 \times 25 = 150$
 $6 \times 26 = 156$
 $6 \times 27 = 162$
 $6 \times 28 = 168$
 $6 \times 29 = 174$
 $6 \times 30 = 180$
 $6 \times 31 = 186$
 $6 \times 32 = 192$
 $6 \times 33 = 198$
 $6 \times 34 = 204$
 $6 \times 35 = 210$
 $6 \times 36 = 216$
 $6 \times 37 = 222$
 $6 \times 38 = 228$
 $6 \times 39 = 234$
 $6 \times 40 = 240$
 $6 \times 41 = 246$
 $6 \times 42 = 252$
 $6 \times 43 = 258$
 $6 \times 44 = 264$
 $6 \times 45 = 270$
 $6 \times 46 = 276$
 $6 \times 47 = 282$
 $6 \times 48 = 288$
 $6 \times 49 = 294$
 $6 \times 50 = 300$



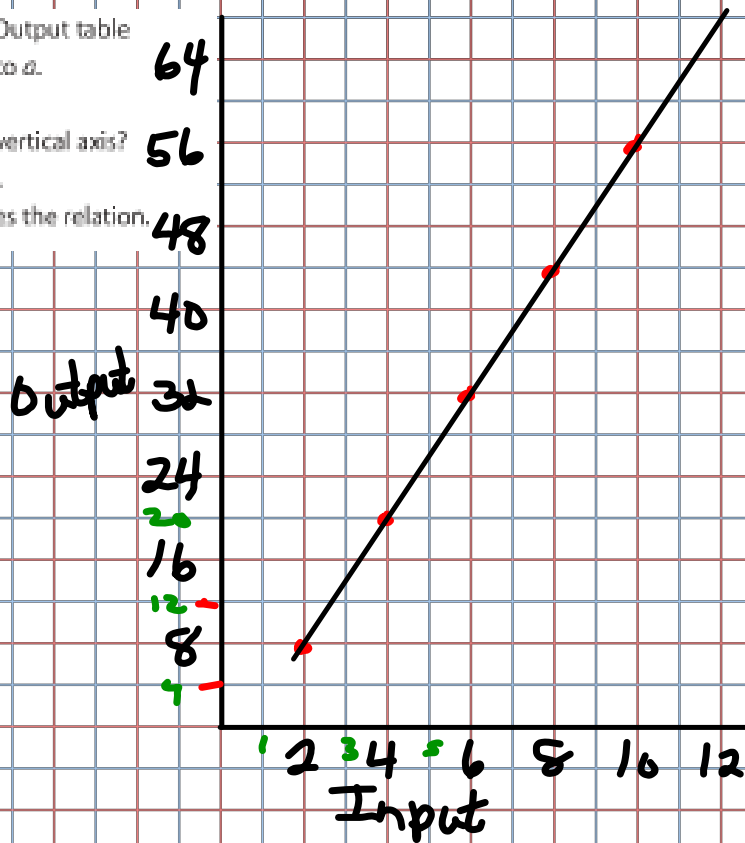
c)

In	Out
0	0
1	2
2	4
3	6
4	8
5	10
6	12

$6 \times 0 = 0$
 $6 \times 1 = 6$
 $6 \times 2 = 12$
 $6 \times 3 = 18$
 $6 \times 4 = 24$
 $6 \times 5 = 30$
 $6 \times 6 = 36$
 $6 \times 7 = 42$
 $6 \times 8 = 48$
 $6 \times 9 = 54$
 $6 \times 10 = 60$
 $6 \times 11 = 66$
 $6 \times 12 = 72$
 $6 \times 13 = 78$
 $6 \times 14 = 84$
 $6 \times 15 = 90$
 $6 \times 16 = 96$
 $6 \times 17 = 102$
 $6 \times 18 = 108$
 $6 \times 19 = 114$
 $6 \times 20 = 120$
 $6 \times 21 = 126$
 $6 \times 22 = 132$
 $6 \times 23 = 138$
 $6 \times 24 = 144$
 $6 \times 25 = 150$
 $6 \times 26 = 156$
 $6 \times 27 = 162$
 $6 \times 28 = 168$
 $6 \times 29 = 174$
 $6 \times 30 = 180$
 $6 \times 31 = 186$
 $6 \times 32 = 192$
 $6 \times 33 = 198$
 $6 \times 34 = 204$
 $6 \times 35 = 210$
 $6 \times 36 = 216$
 $6 \times 37 = 222$
 $6 \times 38 = 228$
 $6 \times 39 = 234$
 $6 \times 40 = 240$
 $6 \times 41 = 246$
 $6 \times 42 = 252$
 $6 \times 43 = 258$
 $6 \times 44 = 264$
 $6 \times 45 = 270$
 $6 \times 46 = 276$
 $6 \times 47 = 282$
 $6 \times 48 = 288$
 $6 \times 49 = 294$
 $6 \times 50 = 300$

3. a) Copy and complete this Input/Output table to show how $6a - 4$ is related to a .
- b) Graph the relation.
 What scale did you use on the vertical axis?
 How did you make your choice.
- c) Explain how the graph illustrates the relation.

Input	Output
a	$6a - 4$
2	8
4	20
6	32
8	44
10	56



1. Copy and complete this Input/Output table for each relation.
- a) $4n$ is related to n .
 - b) $x + 3$ is related to x .
 - c) $4c + 6$ is related to c .

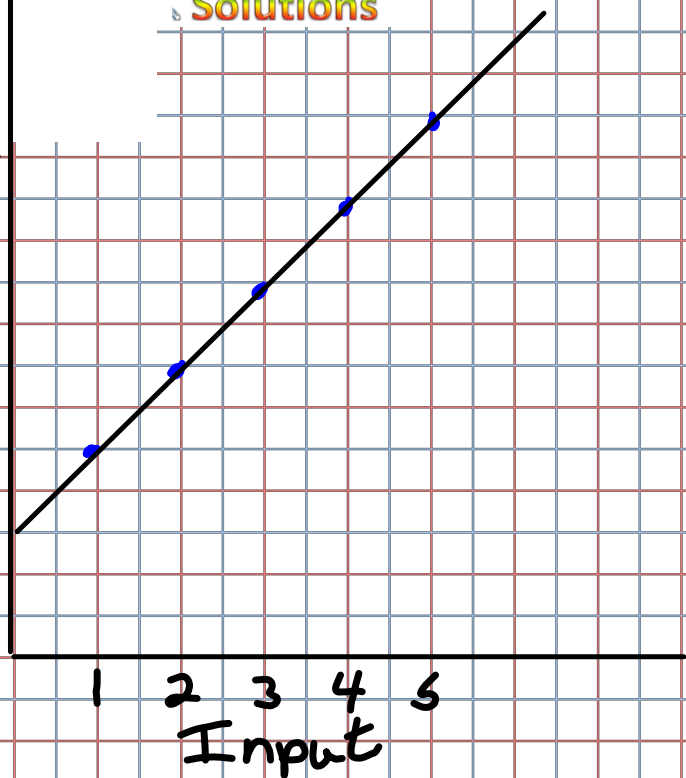
d

Input n	Output $4n+6$
1	10
2	14
3	18
4	22
5	26

output
28
24
20
16
12
8
4

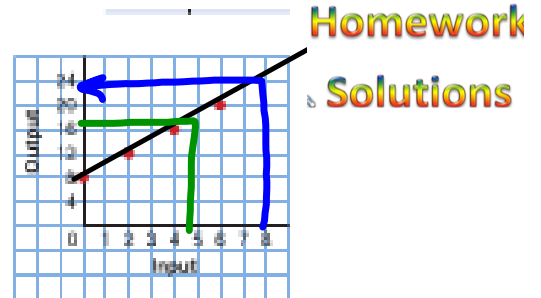
Homework

Solutions



Bob earns \$6/day plus \$4 for every item sold.

4. Look at the graph on the right.
- What is the output when the input is 1?
 - Which input gives the output 18?
 - Extend the graph. What is the output when the input is 8?
 - Suggest a real-life situation this graph could represent.



Input	Output
0	8
2	12
4	16
6	20

a) Input 1
Output \rightarrow 10

b) Output 18
Input \rightarrow 5

c) Input 8
Output \rightarrow 24

2nt 8

Twice the cost of
a ticket increased by 8