Dice Substitution

level 1

Roll a 6-faced dice.
Work out the value of the expression with your number.
This is your score.

As a pair
The largest score wins the game and starts the next game.

If you are working alone
Explore the difference between the larger and smaller scores for each expression.
Use dice with a different numbers of faces and continue the investigation.

	Game 1				Game 2			
	First Dice, x	**Score**	**Second Dice, x**	**Score**	**First Dice, x**	**Score**	**Second Dice, x**	**Score**
x + 3								
10 - x								
5x								
3x ÷ 2								
4x - 1								
2x + 5								
10x - 1								
20 - x								
TOTAL								

Dice Substitution

level 2

Roll two 6-faced dice.
Work out the value of the expression with your number.
This is your score.

As a pair
The largest score wins the game and starts the next game.

If you are working alone
Explore the difference between the larger and smaller scores for each expression.
Use dice with a different numbers of faces and continue the investigation.

Game 1					
	First Dice, x	**Value of expression**	**Second Dice, x**	**Value of expression**	**Difference in values**
x^2					
$x^2 + 2$					
$x(x - 1)$					
$x^2 \div 2$					
$(x + 5)(x + 1)$					
$(3x + 2)(x + 1)$					
$x^2 - 1$					
$(2x - 1)(x - 1)$					
$(4x - 3)(x + 1)$					
$(2x + 3)(3x + 2)$					
$x(x + 10)$					
$(x+5)(x+1)(x+6)$					

Dice Substitution

level 3

Roll two 6-faced dice.
Work out the value of the expression with your number.
This is your score.

As a pair
The largest score wins the game and starts the next game.

If you are working alone
Explore the difference between the larger and smaller scores for each expression.
Use dice with a different numbers of faces and continue the investigation.

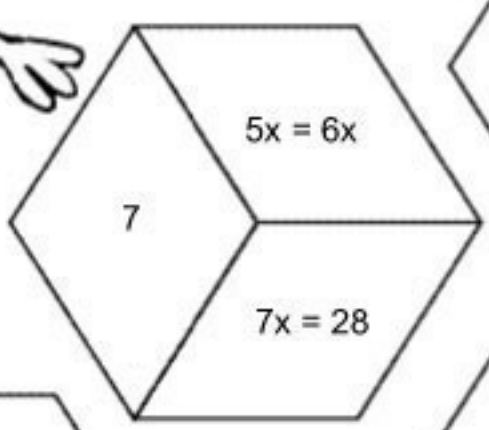
Game 1					
	First Dice, x	**Value of expression**	**Second Dice, x**	**Value of expression**	**Difference between values**
$x(x+2)(x+3)$					
$x(3x-1)(2x+1)$					
$x^2(2x-1)$					
$(x-7)(x-8)$					
$(x^2-1)(x+1)$					
$(3x-7)(5x-8)$					
$(4x-3)(x-5)$					
$x(x-7)(x-8)$					

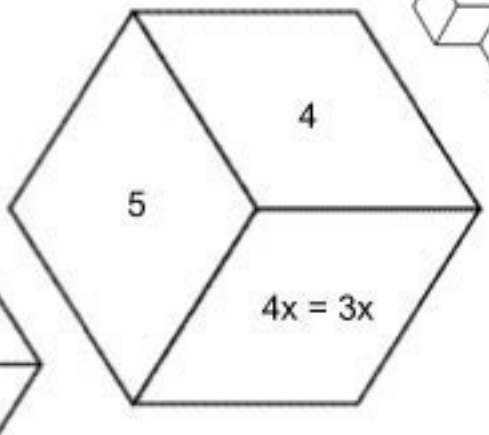
Matching Hexagons

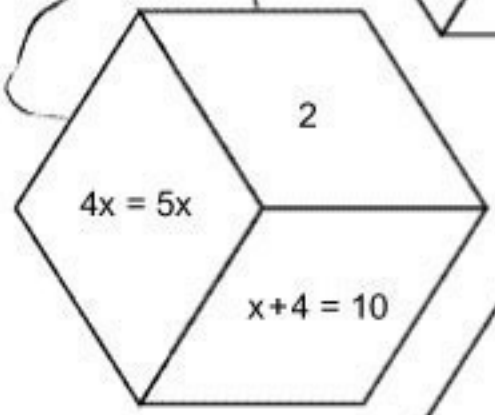
level 1

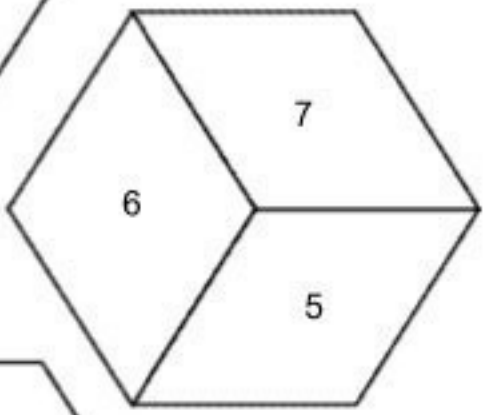
Cut all the hexagon tiles and place the tile with 3 numbers at the centre of your design. Work out the solution to each equation and then complete the design by matching edges with the same number.

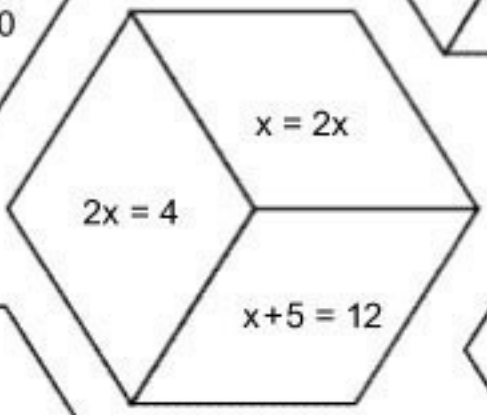
This is the final shape to be achieved.

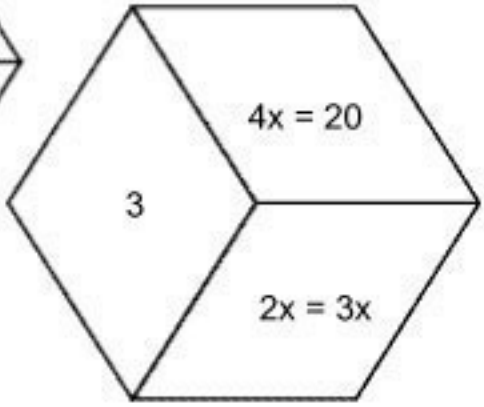


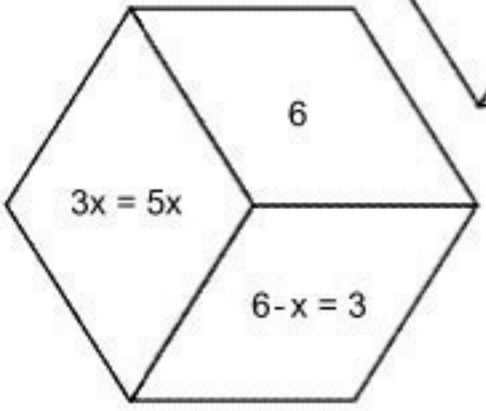










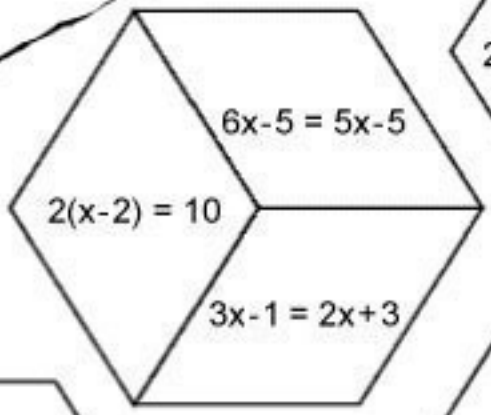


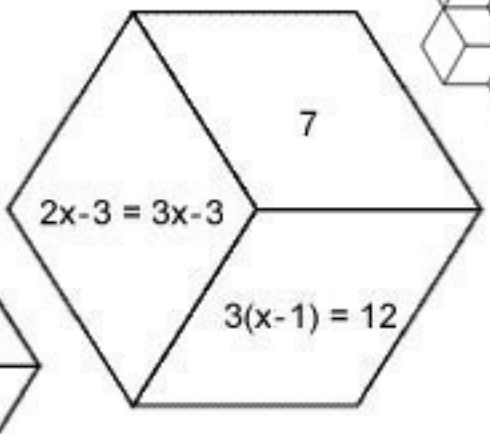
Matching Hexagons

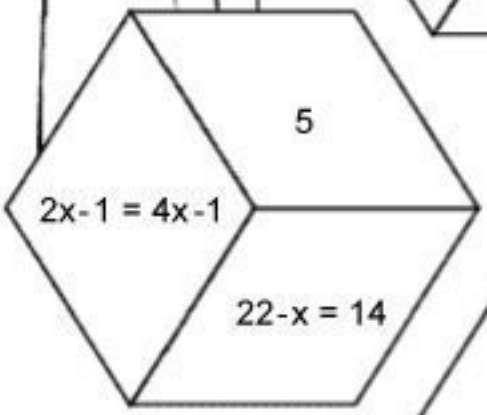
level 2

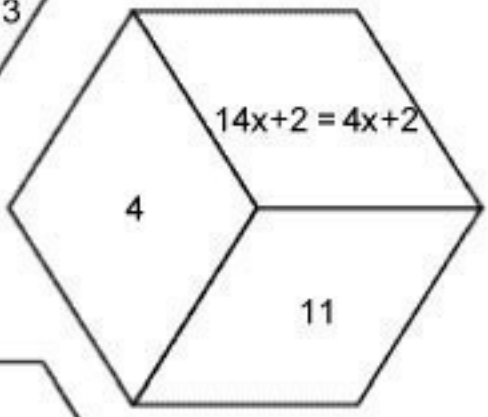
Cut all the hexagon tiles and place the tile with 3 numbers at the centre of your design. Complete the design by matching edges with the solution or the same number.

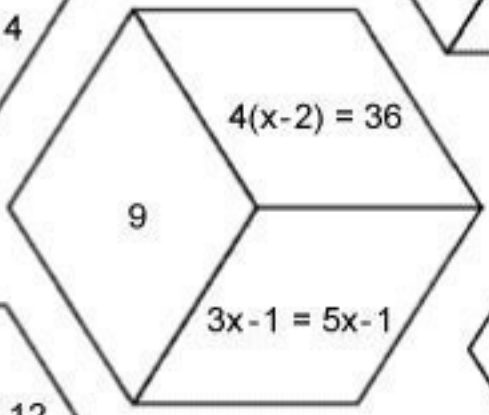
This is the final shape to be achieved.

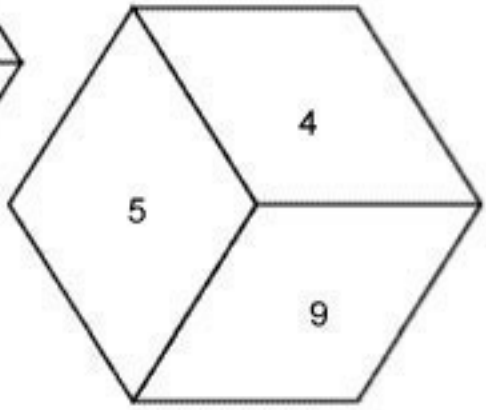


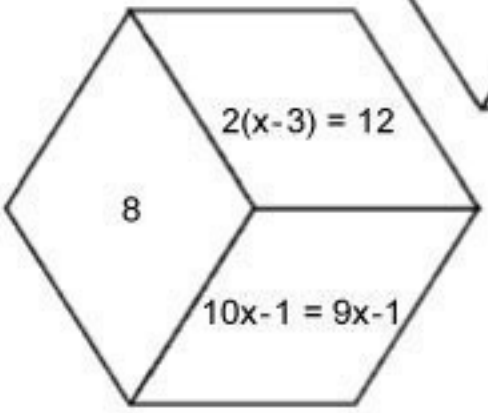






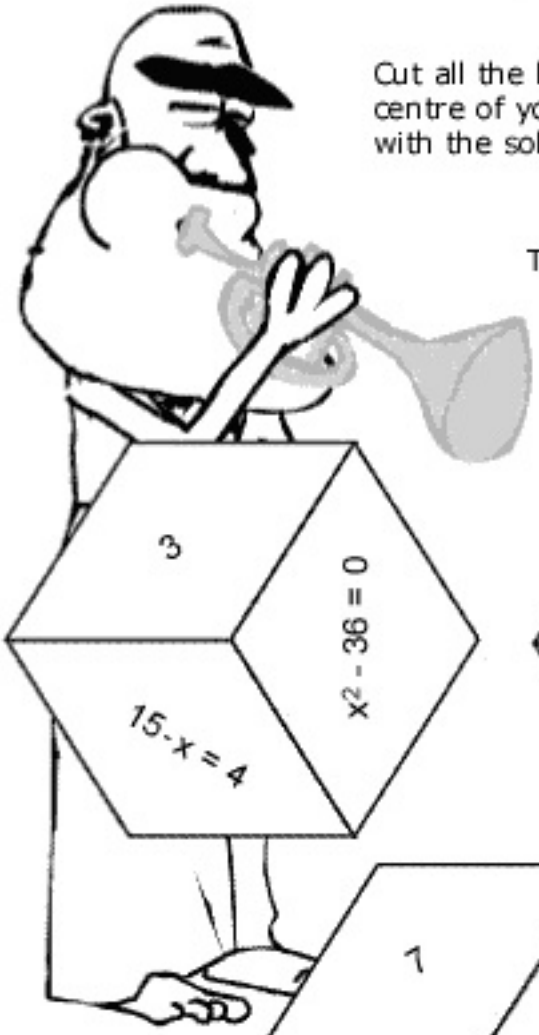






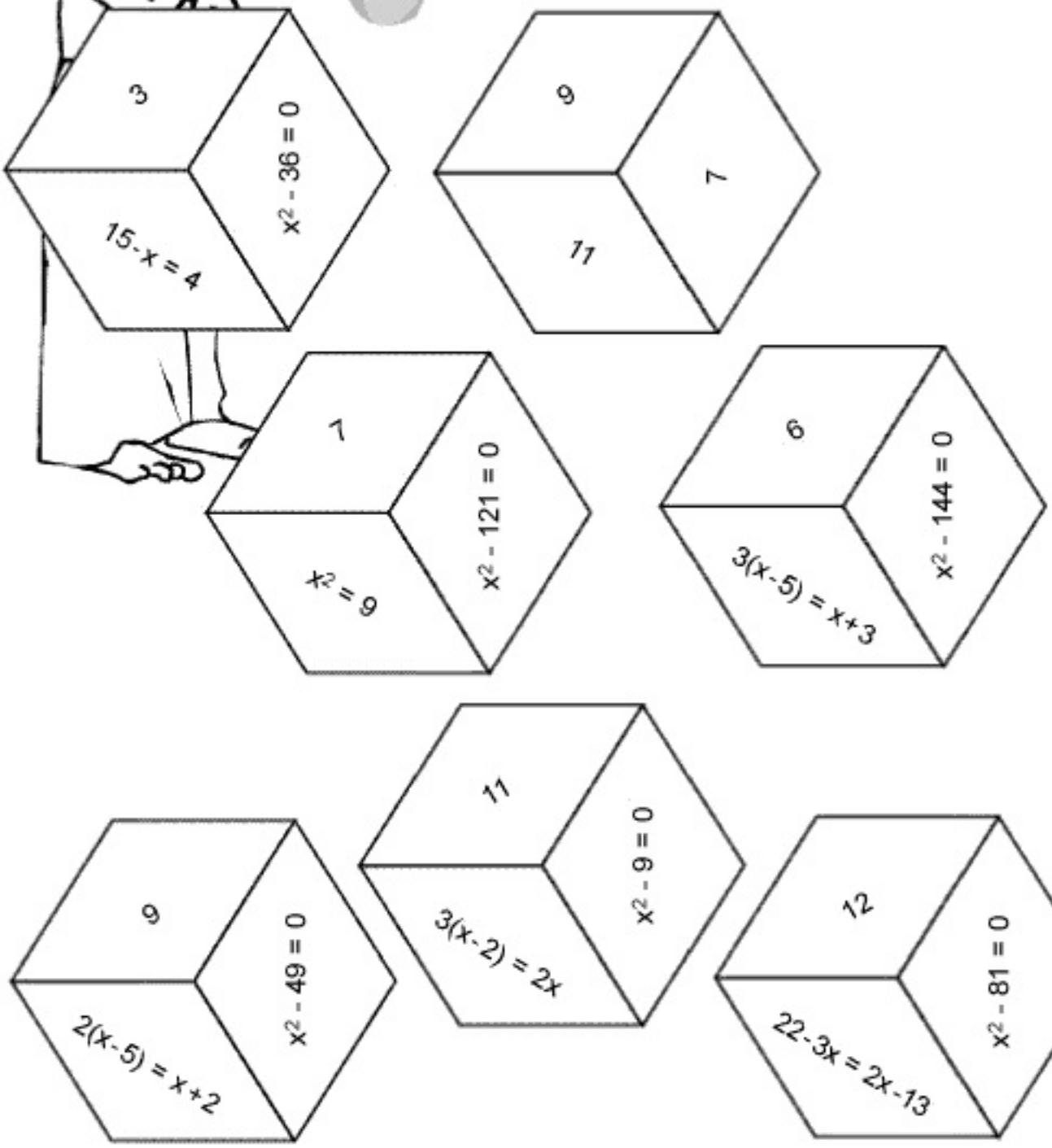
Matching Hexagons

level 3



Cut all the hexagon tiles and place the tile with 3 numbers at the centre of your design. Complete the design by matching edges with the solution or the same number.

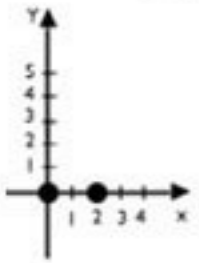
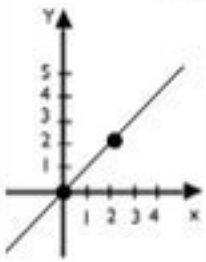
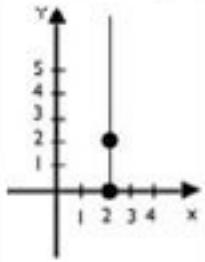
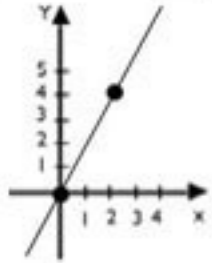
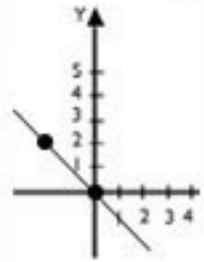
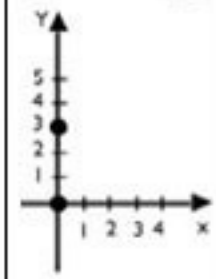
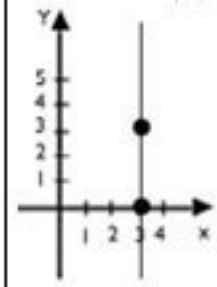
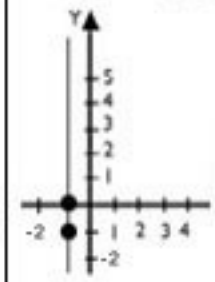
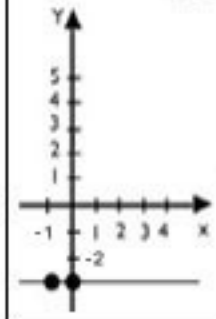
This is the final shape to be achieved.



Matching Game

level 1

Can you reorder the grid into sets of three. Each grid should have one picture, one table and one function. Can you match them?

P1	P2	P3	P4	P5	P6	P7	P8	P9
								

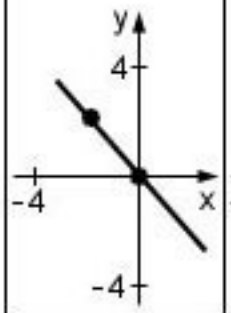
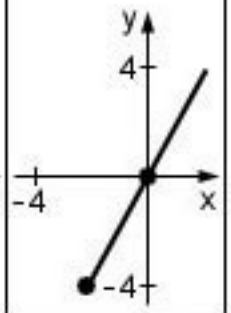
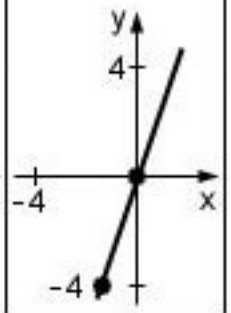
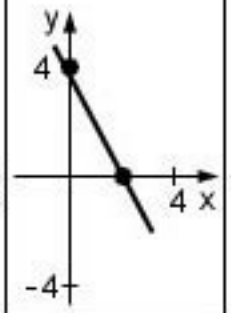
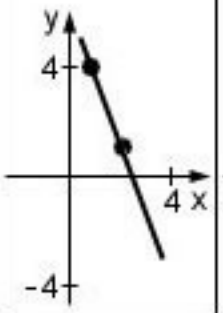
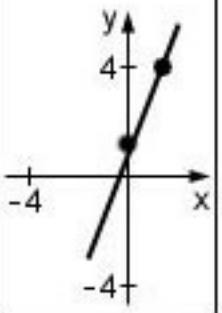
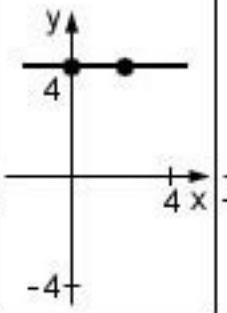
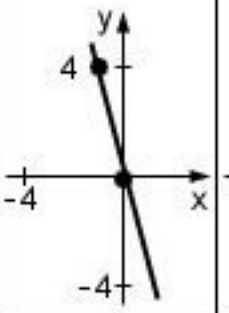
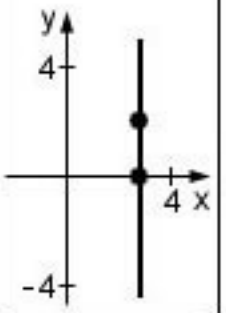
T1		T2		T3		T4		T5		T6		T7		T8		T9	
X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
0	0	3	0	0	0	0	0	-1	0	0	0	-1	-3	2	0	0	0
2	4	3	3	2	0	-2	2	-1	-1	2	2	0	-3	2	2	0	3

E1	E2	E3	E4	E5	E6	E7	E8	E9
X = 2	Y = - 3	X = 3	X = -1	X = 0	Y = x	Y = -x	Y = 0	Y = 2x

Matching Game

level 2

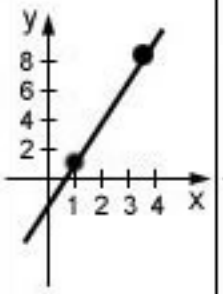
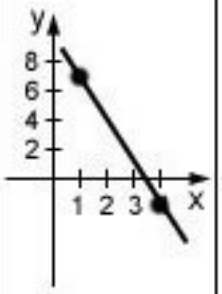
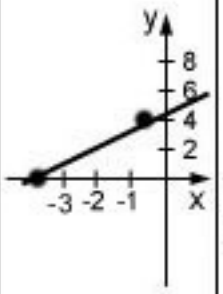
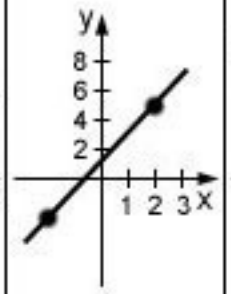
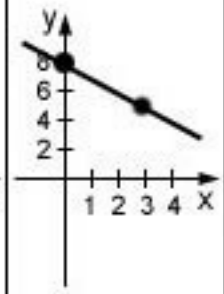
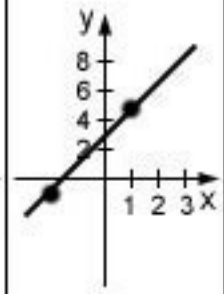
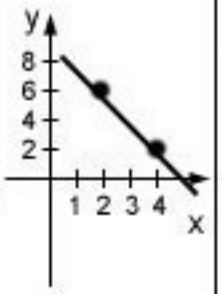
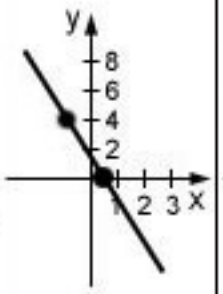
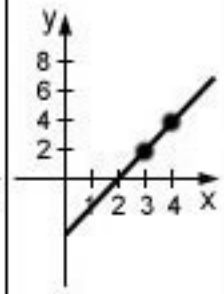
Can you reorder the grid into sets of three. Each grid should have one picture, one table and one function. Can you match them?

P1	P2	P3	P4	P5	P6	P7	P8	P9
								
T1	T2	T3	T4	T5	T6	T7	T8	T9
X | Y 0 | 4 2 | 0	X | Y 0 | 4 2 | 4	X | Y -2 | 2 0 | 0	X | Y 1 | 4 2 | 1	X | Y -1 | 4 0 | 0	X | Y -2 | -4 0 | 0	X | Y 3 | 0 3 | 2	X | Y 0 | 1 1 | 4	X | Y 0 | 0 -1 | -4
E1	E2	E3	E4	E5	E6	E7	E8	E9
Y = 3x +1	X =3	Y = 4	Y= - 4x	Y = 4x	Y =2 x	Y = 7- 3x	Y = - x	Y = 4 – 2x

Matching Game

level 3

Can you reorder the grid into sets of three. Each grid should have one picture, one table and one function. Can you match them?

P1	P2	P3	P4	P5	P6	P7	P8	P9
								
T1	T2	T3	T4	T5	T6	T7	T8	T9
X | Y - 5 | 0 -1 | 4	X | Y 3 | 5 -1 | 9	X | Y 1 | 1 3 | 7	X | Y 2 | 6 4 | 2	X | Y 2 | -5 -1 | 4	X | Y 3 | 2 4 | 4	X | Y 1 | 7 4 | -2	X | Y 2 | 5 - 2 | -3	X | Y 1 | 5 - 2 | -1
E1	E2	E3	E4	E5	E6	E7	E8	E9
Y = x+5	Y = 2x - 4	Y =10 – 2x	Y =1 – 3x	Y = 2x + 3	Y = 10 – 3x	Y = 8 - x	Y = 3x - 2	Y = 2x + 1