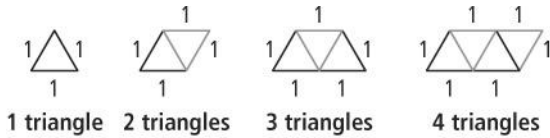


# 4-2 Homework Practice

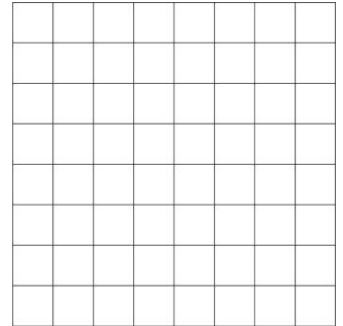
## Patterns and Linear Functions

For each diagram, find the relationship between the number of shapes and the perimeter of the figure they form. Represent this relationship using a table, words, an equation, and a graph.

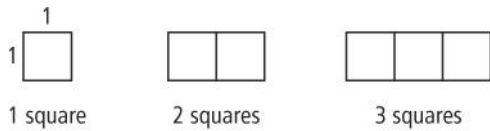
1.



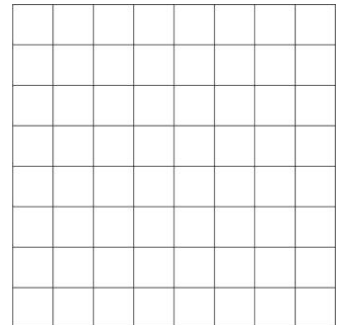
Triangles	1	2	3	4	5	6		$n$
Perimeter	3	4	5				12	



2.



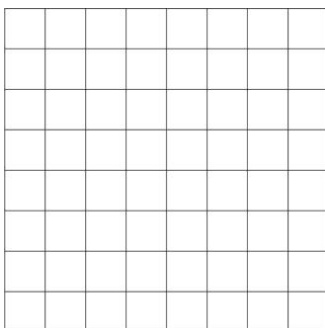
Squares	1	2	3	4	5	6		$n$
Perimeter	4	6	8				22	



For each table, determine whether the relationship is a function. Then represent the relationship using words, an equation, and a graph.

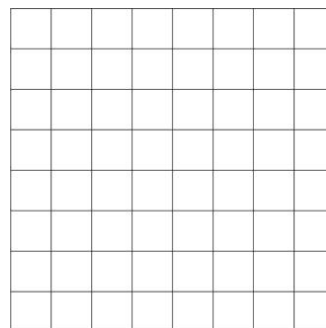
3. Distance Traveled

Time (h)	Distance (mi)
0	0
1	55
2	110
3	165



4. Calories Burned

Minutes (min)	Calories (C)
0	0
10	50
20	100
30	150



# 4-2

## Practice (continued)

Form G

### Patterns and Linear Functions

**Electric Car** An automaker produces a car that can travel 40 mi on its charged battery before it begins to use gas. Then the car travels 50 mi for each gallon of gas used. Represent the relationship between the amount of gas used and the distance traveled using a table, an equation, and a graph. Is total distance traveled a function of the gas used? What are the independent and dependent variables? Explain.

#### Understanding the Problem

5. Describe the miles that the car can travel on the different types of fuel.

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#### Planning the Solution

6. Give a verbal description of the relationship between the miles the car travels and gallons of gas it uses.

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#### Getting an Answer

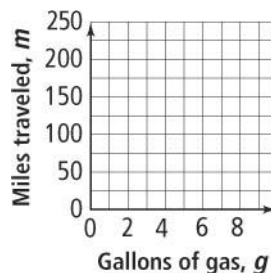
7. Represent this relationship with an equation.

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8. Represent this relationship with a table.

Gallons of gas, $g$	Miles Traveled, $m$

9. Represent this relationship with a graph.



6. Is total distance traveled a function of the gas used? What are the independent and dependent variables? Explain.

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