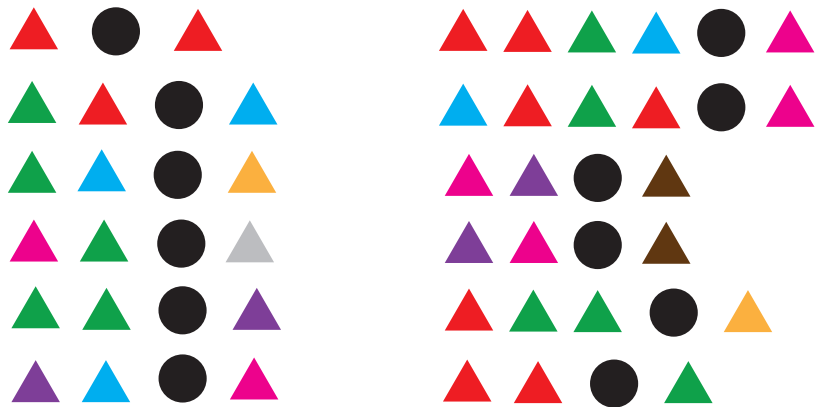












# Triangles



					
	speak	shout	dream	clown	garden
	hear	see	house	small	fairy
	red	rose	circus	well	lilac
	lamb	despair	value	hope	large
	petal	point	font	rain	cloud

What's the shortest time, in minutes, that you would need to capture all the gnomes?

[illegible]

# Hexagon?

In the xyz-coordinate space, define the following sets:

$A = \{(x,y,z) | x=y\}$  - this is the set of all points whose x-coordinate equals its y-coordinate

$$B = \{(x,y,z) \mid y=z\}$$
$$C = \{(x,y,z) | z=x\}$$
$$M = \{(x,y,z) | x+y+z=0\}$$
$$S = \{(x,y,z) | x^2 + y^2 + z^2 = 2\}$$

Let  $X = (A \cap M \cap S) \cup (B \cap M \cap S) \cup (C \cap M \cap S)$

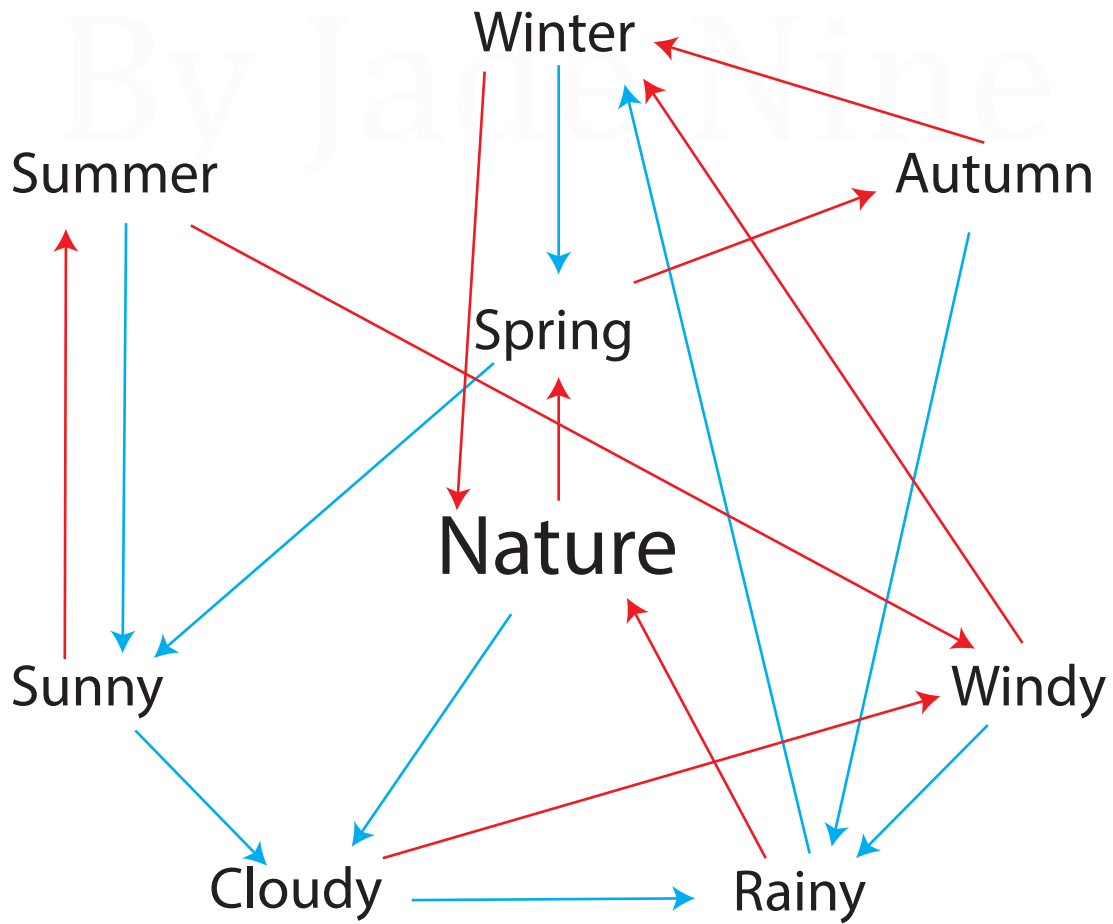
Determine the area of X as a simplified number of the form  $a\sqrt{b}$ .

[illegible]

How many odd numbers are there in the first 64 rows of Pascal's Triangle?

[illegible][illegible]

# Seasons



Nature — — Autumn

Nature | — | — Windy

Nature | — — — Spring

Nature — — | — — Winter

Nature — | — — | — Windy

Nature — — — | — Spring

Nature | — — | — Nature

Nature — | — | — — — Nature

Rainy | — — — | — — — ?

Fill in the blanks for the final answer

I \_\_\_\_\_ a \_\_\_\_\_ !  
(Triangles) (Pascal) (Hexagon?) (Gnomes) (Seasons)