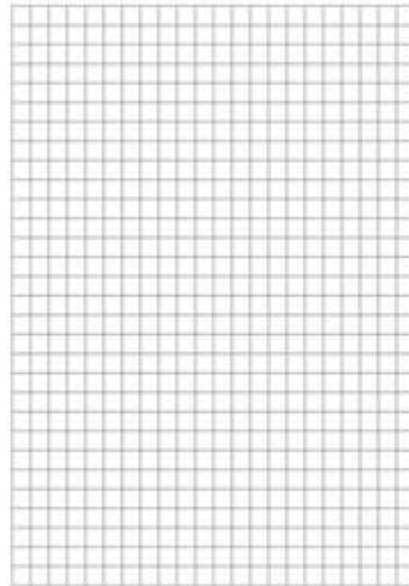


# Exponential Models: Zombie Apocalypse



Uh Oh! Zombies have invaded our school. Initially your teacher was infected and came to Algebra class and made one student a zombie. Every 10 minutes every zombie "made a new zombie friend". After one hour, how many zombies are there in school?

stage	# zombies
0	
1	
2	
3	
4	
5	
6	



Write an equation that will determine the number of zombies after each ten minute period.

How many zombies will there be after 2 hours total?

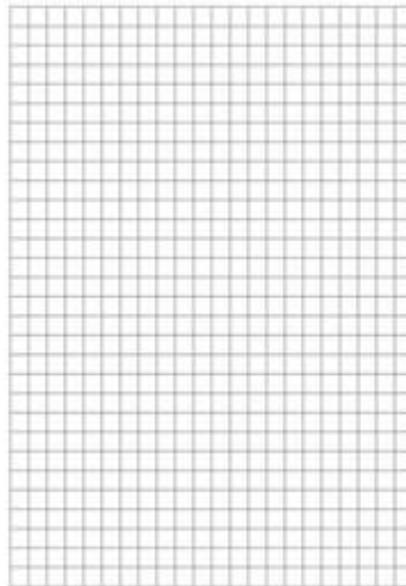
If there are 1200 students and teachers in your school, how long will it take for everyone to become a zombie?

# Exponential Models: March Madness

It's tournament time! At each round of the tournament, teams play against one another and only the winning team advances to the next round. Find the number of games played in each round.



round	# games
0	
1	
2	
3	
4	
5	
6	



Write an equation to determine the number of games in each round.

How many games are in the third round of the tournament?

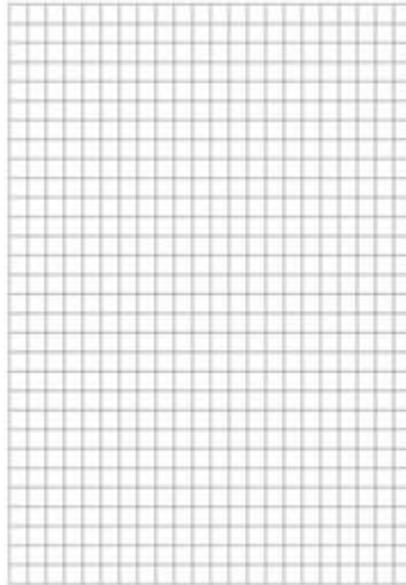
Can the tournament have eight rounds? Justify your answer.

## Welcome to the Frog Pond

Eight frog friends live in a frog pond. Every day they are joined by two new frog friends. How many frogs live in the pond after a week?



day	# frogs
0	
1	
2	
3	
4	
5	
6	
7	



Write an equation to estimate the number of frogs in the pond on any given day.

How many frogs live in the pond after 2 weeks?

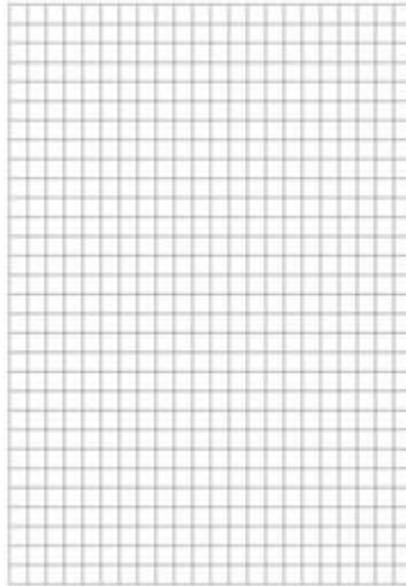
When will there be 1500 frogs living in the frog pond?

## Welcome to the Frog Pond (Part 2)

Four frog friends live in a frog pond. They are so happy that they decide to invite more frog friends to come live with them. Every day when they jump in to the frog pond, the frogs that jump in to the right side of the pond will invite two friends to come live in the frog pond. How many frogs live in the pond after a week?



day	# frogs
0	
1	
2	
3	
4	
5	
6	
7	

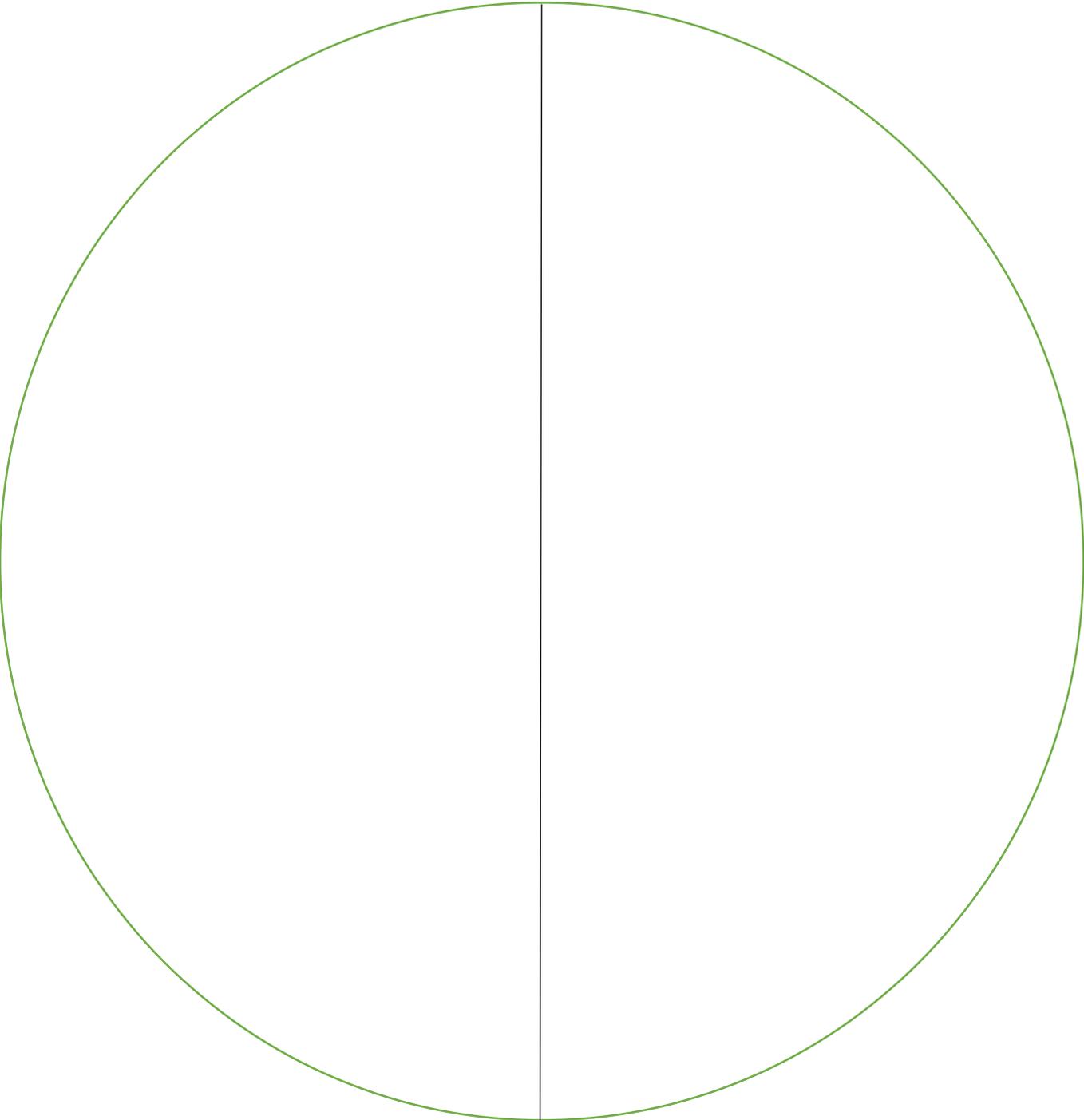


Write an equation to estimate the number of frogs in the pond on any given day.

How many frogs live in the pond after 2 weeks?

When will there be 1500 frogs living in the frog pond?

Frog Pond



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