

Name: _____



Llama Super Challenge

Each day I give my pet llama a bath in the bathtub- he's a clean llama. It takes 8 gallons to wash the llama. On the first day the 8 gallons go right down the drain, but each day after that, because there's so much llama fur in the tub, only half as much water goes down the drain.

For example:

On the second day, only 4 gallons go down the drain, while 4 gallons are stuck in the tub.

On the third day, only 2 gallons go down the drain, while 6 more gallons are stuck in the tub.

If this pattern continues, how many days will it be before there is $56 \frac{1}{32}$ gallons of water in the bathtub?