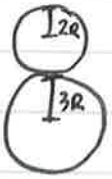
Initial Snowman:



1. If Frosty is half its height, its height will ~~getting~~ be 5R.
Decreased length: 10R-5R= 5R
Decreased length for each snowballs: 5R÷2= 2.5R
Length of top snowball after melting: 4R-2.5R=1.5R radius: 0.75R
Length of bottom snowball after melting: 6R-2.5R=3.5R radius: 1.75R
Volume ratio:
$(0.75R)^3 \times \frac{4}{3}\pi + (1.75R)^3 \times \frac{4}{3}\pi : (2R)^3 \times \frac{4}{3}\pi + (3R)^3 \times \frac{4}{3}\pi$
$= 5.578125 : 35$
$= \underline{37 : 224}$

2. If Frosty is one tenth of its height, its height will be R.
Decreased length: 10R-R= 9R
Decreased length for each snowballs: 9R÷2=4.5R
Length of top snowball after melting: 4R-4.5R= -0.5R?
So we have to use a different method.
Let's say the top snowball already melted, and bottom snowball occupy the height of R.
It means that length of 5R are decreased to each snowballs.
Length of bottom snowball after melting: R radius: 0.5R
Volume ratio:
$(0.5R)^3 \times \frac{4}{3}\pi : (2R)^3 \times \frac{4}{3}\pi + (3R)^3 \times \frac{4}{3}\pi$
$= 0.125 : 35$
$= \underline{1 : 280}$