BLOWING UP BALLOONS

Asha and Sam have some balloons, some are red and some are blue.

First, Asha blew up a red balloon.

After her first puff her balloon had a circumference of 24 cm.

Her second puff added $^1/_2$ as much again to that.

Her third puff increased it by $^1/_3$.

Her fourth puff increased it by $^1/_4$ and her fifth puff by $^1/_5$.

Her sixth puff increased it by $^1/_6$ and at the beginning of her seventh puff it went...

BANG!

Next, Sam blew up a blue balloon.

After his first puff his balloon had a circumference of 14 cm.

Just like Asha's, his second puff added $^1/_2$ as much to that.

His third puff increased it by $^1/_3$.

His fourth puff increased it by $^1/_4$ and so on.

His balloon bursts when it gets to exactly the same size as Asha's when hers burst.

How many puffs had Sam done before his balloon burst?

What do you notice about each increase in size of Asha's balloon?

What do you notice about each increase in size of Sam's balloon?