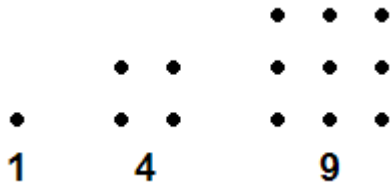


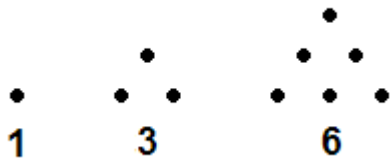
1. The Taipei 101 tower in Taiwan is the tallest building in the world and is $\frac{1}{3}$ of a mile high. If we changed the length of a foot to 14 inches instead of 12 inches, how tall (in feet) would the tower be? (Round to the nearest tenth of a foot)

_____ feet

2. **Square numbers** are numbers that can be formed into square shapes with pebbles. 1, 4, and 9 are the first three square numbers.

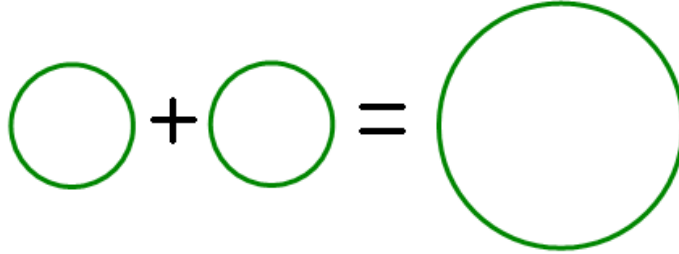


Triangular numbers are numbers that can be formed into triangular shapes with pebbles. 1, 3 and 6 are the first three triangular numbers.



1 is both a triangular number and a square number. What is the next number that is both square and triangular?

3. The area of the two smaller circles put together is the same area as the bigger circle. What is the ratio of the bigger circle's radius to the radius of one of the smaller circles?



4. Jack was born on the 2,650,000th second of March. What is Jack's birthday?

5. A certain history class is made up of 5 students: William, Antonio, Beth, Amy, and Lance. The class takes a history test. Antonio, Amy, and Lance get scores of 93, 65, and 76. The teacher announces that the average score for the entire class is 86.4. What is the **average of just William's and Beth's scores**?

Team Answers:

1. 1508.6 ft

2. 36

3. 1.414 or $\sqrt{2}$

4. The 31st of March

5. 99