

2010 TAPS Round 4

16. "Fibonacci numbers" are named for Leonardo Pisano (nicknamed Fibonacci), pictured below, who lived from 1170-1250 in Italy.

The Fibonacci number sequence begins with 1 and 1; the next number in the list is the sum of the two preceding numbers: 1, 1, 2, 3, 5, 8,...

The value of the numbers in this pattern grows much larger than you might imagine. If 1 is the first Fibonacci number, find the 20th number in the sequence.



17. Marcie traveled to Vancouver, British Columbia, to visit her aunt.

On the airplane, video screens showed temperatures outside the airplane in both the Celsius scale and the Fahrenheit scale. At one point, Marcie noticed that the outside temperature was almost exactly the same value for both Celsius and Fahrenheit. What temperature was it outside the airplane at that point?

Hint: the freezing temperature of water reads 0°C and 32°F .

A difference of 1.0° on the Celsius scale is a difference of 1.8° on the Fahrenheit scale.

18. What is the interior angle formed by the hands of a clock at 10:17 A.M.?

19. When 5 new girls joined a class, the percent of girls increased from 40% to 50%. What is the number of boys in the class?

20. One-eighth is the same part of one-sixth as one-third is of what number?
Type in answer as a fraction in simplest terms.