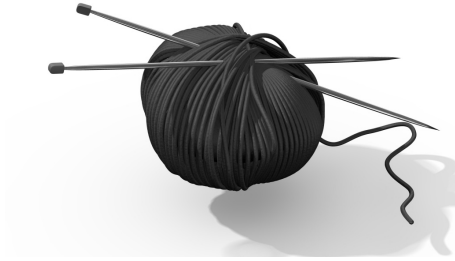


1. Shira uses 6 small skeins of yarn for each scarf she knits. In order to be ready for the next holiday, she needs to make 15 scarves. How many small skeins of yarn does she need?

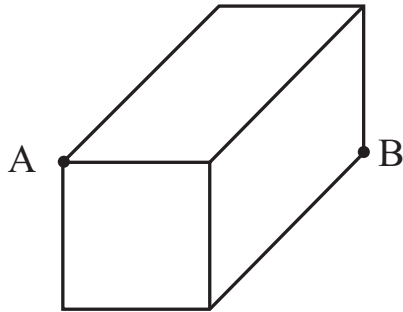


1. _____ skeins

2. Two arithmetic sequences A and B both begin with 30 and have common differences of absolute value 10, with sequence A increasing and sequence B decreasing. What is the absolute value of the difference between the 51st term of sequence A and the 51st term of sequence B?

2. _____

3. A rectangular prism measures 10-inches by 20-inches by 10-inches. What is the length, in inches, of the diagonal connecting point A and point B? Express your answer in simplest radical form.

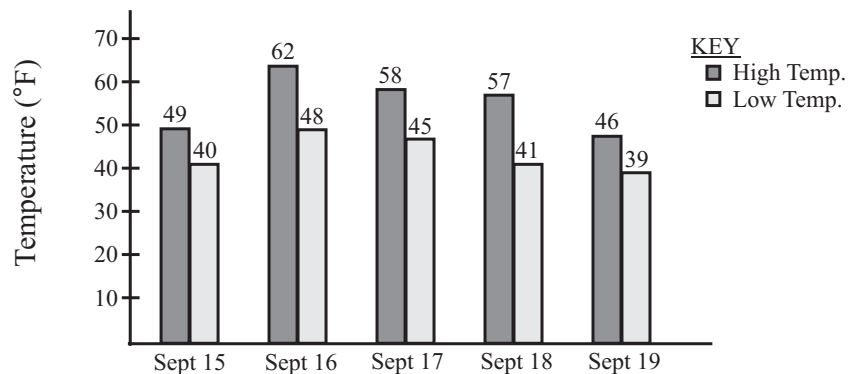


3. _____ inches

4. According to the chart shown, what was the average daily high temperature in Addington from September 15th, 2008 through September 19th, 2008, inclusive? Express your answer as a decimal to the nearest tenth.

4. _____ °F

Daily High/Low Temperature in Addington
(September 15, 2008 – September 19, 2008)



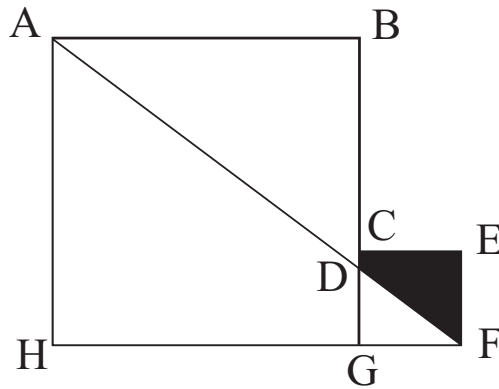
5. In the equation $\frac{7^{48} - 7^{47} - 7^{46}}{41} = 7^x$, what is the value of x ?

5. _____

6. Cindy wishes to arrange her coins into X piles, each consisting of the same number of coins, Y . Each pile will have more than one coin and no pile will have all the coins. If there are 13 possible values for Y given all of the restrictions, what is the smallest number of coins she could have?

6. _____ coins

7. In the figure below, a 3-inch by 3-inch square adjoins a 10-inch by 10-inch square. What is the area of the shaded region? Express your answer in square inches as a common fraction.



7. _____ sq inches

8. Each of the integers 1, 2, 3, ..., 16 is written on a separate slip of paper and these slips are placed in a pile. Jillian will randomly draw slips from the pile without replacement and will continue drawing until two of the numbers she has drawn from the pile have a product that is a perfect square. What is the maximum number of slips that Jillian can draw without obtaining a product that is a perfect square?

8. _____ slips