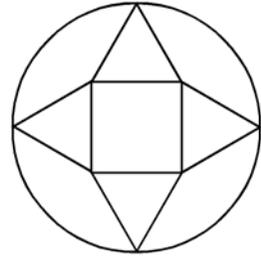


Warm-Up 15

1. _____ degrees At 12:00 noon the angle formed between the minute and the hour hand on a standard clock is zero degrees. What is the degree measure of the angle formed at 12:02pm?

2. _____ What is the least possible product of four distinct positive integers whose sum is 27?

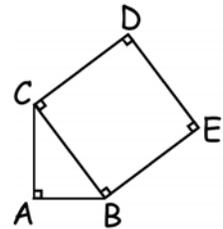
3. _____ A circle of radius 6cm is inscribed by four equilateral triangles and a square as shown. What is the side length of the square? Express your answer in simplest radical form.



4. _____ Kelly and Amir are playing a dice game. Kelly rolls a standard six-faced die with faces numbered 1 through 6, while Amir's six-faced die has faces numbered 2 through 7. The person who rolls the higher number wins, and Kelly wins in the case of a tie. What is the probability that Amir will win if each rolls once?

5. _____ What is the remainder when 5^6 is divided by 7?

6. _____ In right triangle ABC, $AB=3\text{cm}$. Square BCDE has a side length of 5cm. What is the distance between A and D? Express your answer in simplest radical form.



7. _____ : _____ sec Tom can type 40 words per minute, Uday can type 50 words per minute, and Venessa can type 60 words per minute. Working together, how long will it take for them to type 1,000 words? Express your answer in minutes and seconds, separated by a colon.

8. _____ What is the least positive integer n for which the fraction $\frac{101}{n}$ is less than 1 and can be represented by a terminating decimal?

9. _____ A set of five integers plotted on the number line has the property that no two points in the set are the same distance apart. What is the smallest possible distance between the least and the greatest of these five integers?

10. _____ Jason has two bags of letters. One of the bags contains each of the six letters in the word ELEVEN, and the other contains the six letters in the word TWELVE, but he cannot remember which bag contains which letters. After drawing four letters from one bag, what is the probability that Jason still won't be able to determine which bag contains which letters?