

Student Name: _____

Please write your name on *every* page.

4 Section D

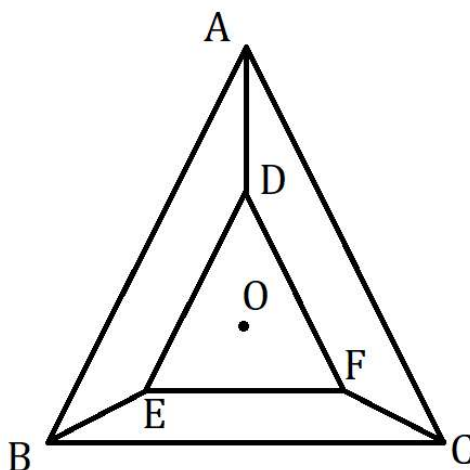
D1

A cake recipe calls for $1\frac{1}{2}$ cups of flour, $\frac{3}{4}$ of a cup of sugar and $\frac{1}{3}$ of a cup of milk. A baker wants to change the recipe by using half of the flour, one third of the sugar, and one quarter of the milk. How many cups of ingredients are needed in total for the modified recipe?

Answer to D1: _____

D2

Triangles ABC and DEF are both equilateral with the same centre O . What is the measure of $\angle EBC$?



Answer to D2: _____

D3

Kevin's school bus has a $\frac{1}{5}$ chance of arriving late on any given day. How many days will Kevin have to wait for the bus before it is more likely than not that the bus will have arrived late on at least one day?

Answer to D3: _____

Student Name: _____

Please write your name on *every* page.

D4

What is the smallest number that is a multiple of every one digit positive integer?

Answer to D4: _____

D5

A triangle has side lengths 3, 4, and x . It is either right or isosceles. What is the sum of all possible values of x ?

Answer to D5: _____

D6

How many numbers less than 100 have exactly three factors?

Answer to D6: _____

D7

The *reciprocal average* of 5 numbers a, b, c, d , and e , is given by $\frac{5}{1/a+1/b+1/c+1/d+1/e}$. How much larger is the mean of the numbers 1, 3, 4, 6, and 8 than their reciprocal average?

Answer to D7: _____

D8

Find the sum of all possible values of the greatest common divisor of 2025 and some other positive integer.

Answer to D8: _____