XVI математическо състезание „Вергил Крумов”

17.11.2012 година, Силистра

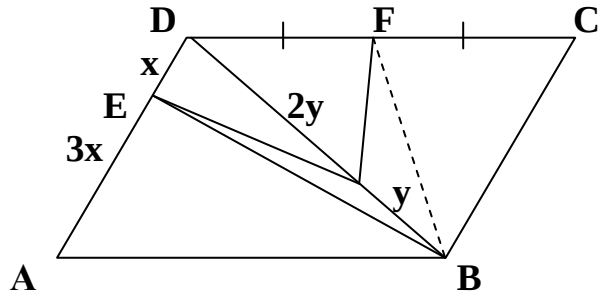
VI клас

Отговори:

Зад.1	Зад.2	Зад.3	Зад.4	Зад.5	Зад.6	Зад.7	Зад.8	Зад.9	Зад.10
В	**Г**	**Г**	**Б**	**Г**	**А**	**А**	**Б**	**Б**	**В**

Зад.11	Зад.12	Зад.13	Зад.14
300	**26%**	$\frac{335}{2012}$	**537**

Решение на Задача 15:



Нека $S_{ABCD} = S$

$AE = 3DE \Rightarrow AD = 4DE \Rightarrow S_{BED} = \frac{1}{4}S_{ABD} = \frac{1}{4}.\frac{S}{2} = \frac{1}{8}S$ **/2т/**

$DP = 2BP \Rightarrow S_{PDE} = \frac{2}{3}S_{BED} = \frac{2}{3}.\frac{1}{8}S = \frac{1}{12}S$ **/2т/**

$DF = FC \Rightarrow S_{BED} = \frac{1}{2}S_{BCD} = \frac{1}{2}.\frac{1}{2}S = \frac{1}{4}S$ **/2т/**

$S_{DPF} = \frac{2}{3}S_{BFD} = \frac{2}{3}.\frac{1}{4}S = \frac{1}{6}S$ **/2т/**

$S_{EPFD} = S_{EPD} + S_{DPF} = \frac{1}{12}S + \frac{1}{6}S = \frac{3}{12}S = \frac{1}{4}S = \frac{1}{4}.64 = 16см^2$ **/1т/**