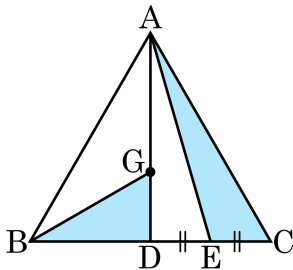


1. 다음 그림에서 점 G는 $\triangle ABC$ 의 무게중심이고, 점 E가 $\overline{DC}$ 의 중점일 때, $\triangle GBD : \triangle AEC$ 는?



① 1 : 1

② 1 : 2

③ 2 : 3

④ 3 : 4

⑤ 4 : 5

해설

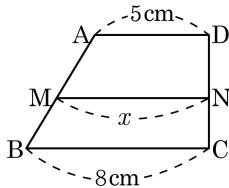
$\triangle ABC = S$ 라 하면,

$$\triangle ABD = \frac{1}{2}S, \triangle GBD = \frac{1}{3}\triangle ABD = \frac{1}{6}S$$

$$\triangle ADC = \frac{1}{2}S, \triangle AEC = \frac{1}{2}\triangle ADC = \frac{1}{4}S$$

$$\triangle GBD : \triangle AEC = \frac{1}{6} : \frac{1}{4} = 2 : 3$$

2. 다음 그림에서
 $\overline{AD} \parallel \overline{MN} \parallel \overline{BC}$, $\square AMND = \square MBCN$ 일
 때, x^2 의 값을 구하면?



① 44

② 44.5

③ 45

④ 45.5

⑤ 46

해설

$$\triangle OAD : \triangle OBC = 5^2 : 8^2 = 25 : 64$$

$$\square AMND = \square MBCN$$

$$\triangle OAD : \triangle OMN = 5^2 : x^2$$

$$\triangle OMN = \triangle OAD + \frac{1}{2} \square ABCD$$

$$\begin{aligned} \triangle OAD : \triangle OMN &= 25 : 25 + \frac{(64 - 25)}{2} \therefore \\ &= 25 : 44.5 \end{aligned}$$

$$x^2 = 44.5$$

