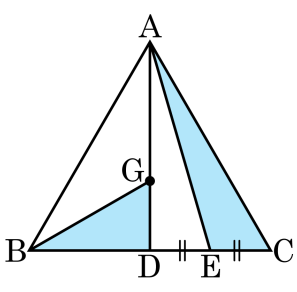
**1.** 다음 그림에서 점 G는 $\triangle ABC$의 무게중심이고, 점 E가 $\overline{DC}$의 중점일 때, $\triangle GBD : \triangle AEC$ 는?




① 1 : 1 ② 1 : 2 ③ 2 : 3 ④ 3 : 4 ⑤ 4 : 5

해설

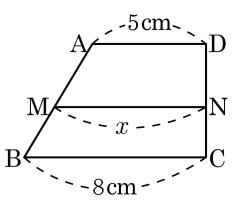
$\triangle ABC = S$라 하면,

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

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

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

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




① 44 ② 44.5 ③ 45 ④ 45.5 ⑤ 46

해설

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

$\square AMND = \square MBCN$

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

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

$\triangle OAD : \triangle OMN = 25 : 25 + \frac{(64-25)}{2}$ $\therefore$

$= 25 : 44.5$

$x^2 = 44.5$