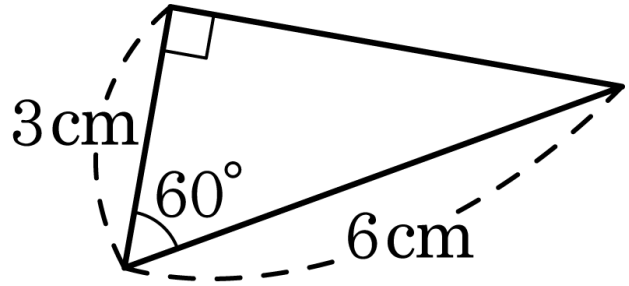
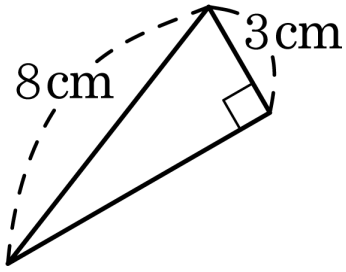
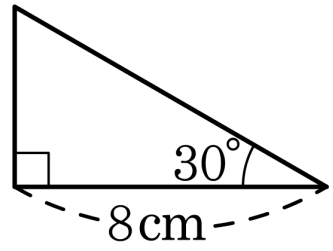
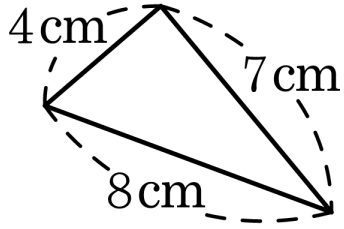
1. 다음 보기의 $\triangle ABC$ 와 닮은 도형을 찾으면?

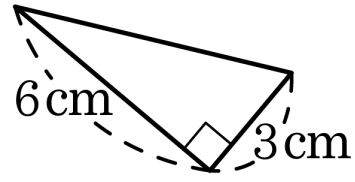
보기

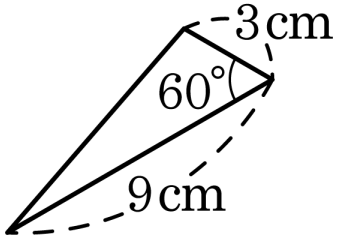


① 

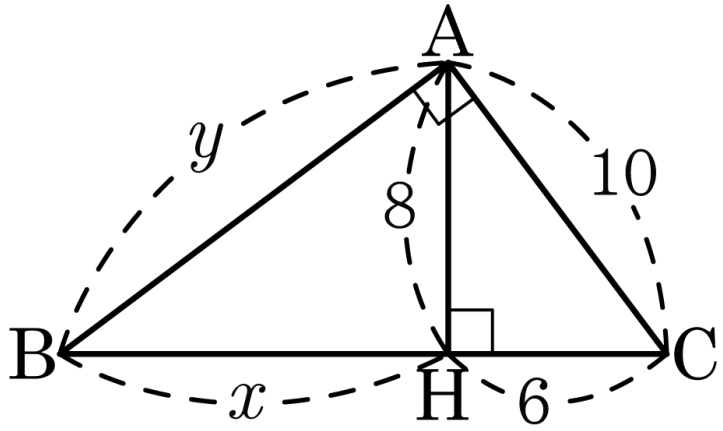
② 

③ 

④ 

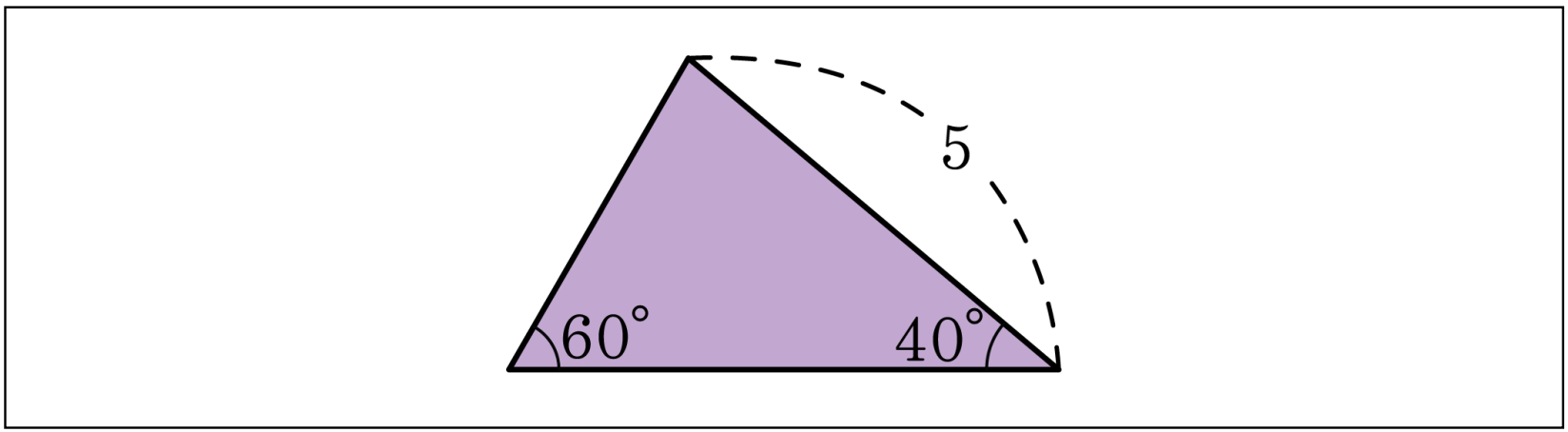
⑤ 

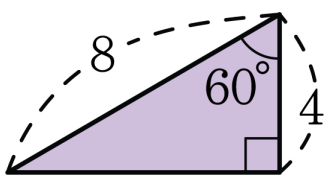
2. 다음 그림과 같은 직각삼각형 ABC 에서 $x+y$ 의 값을 구하면?

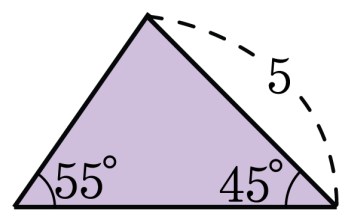


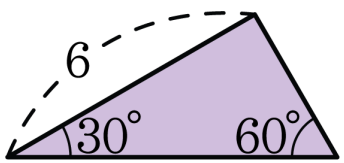
① $\frac{68}{3}$ ② $\frac{70}{3}$ ③ 24 ④ $\frac{74}{3}$ ⑤ 25

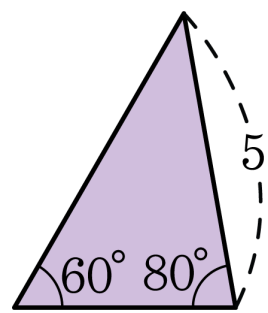
3. 다음 삼각형 중에서 주어진 삼각형과 닮은 삼각형은?

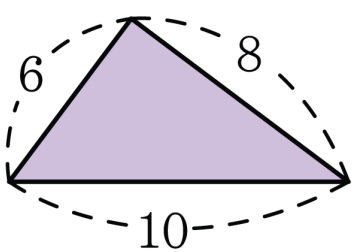


① 

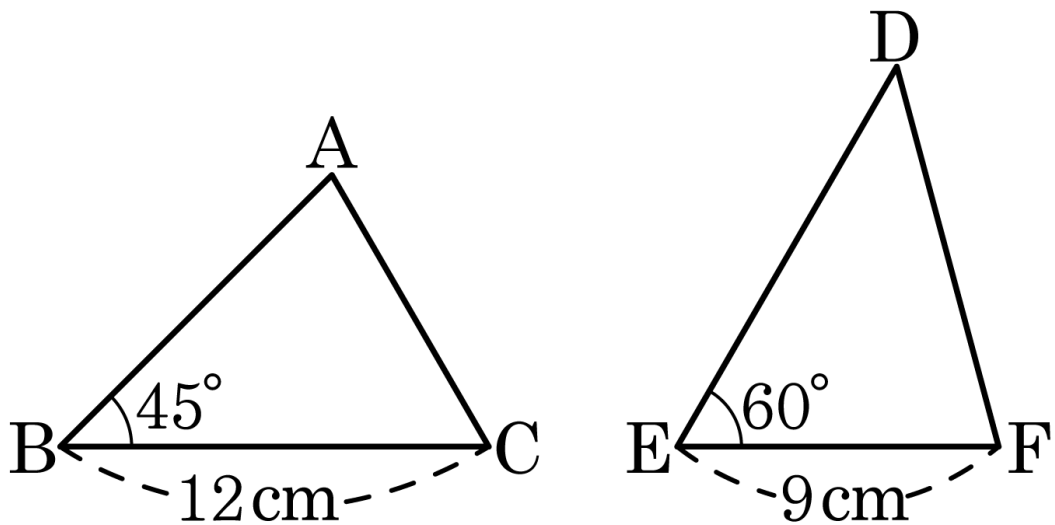
② 

③ 

④ 

⑤ 

4. 다음 그림에서 $\triangle ABC$ 와 $\triangle DEF$ 가 닮은 도형이 되려면 다음 중 어느 조건을 만족해야 되는가?



① $\angle A = 75^\circ$, $\angle D = 45^\circ$

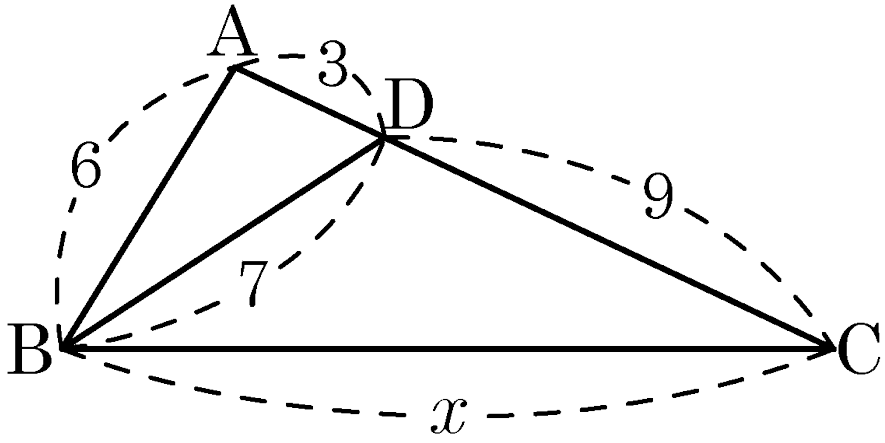
② $\angle C = 80^\circ$, $\angle F = 55^\circ$

③ $\overline{AB} = 8\,\text{cm}$, $\overline{DE} = 6\,\text{cm}$

④ $\overline{AC} = 4\,\text{cm}$, $\overline{DF} = 3\,\text{cm}$

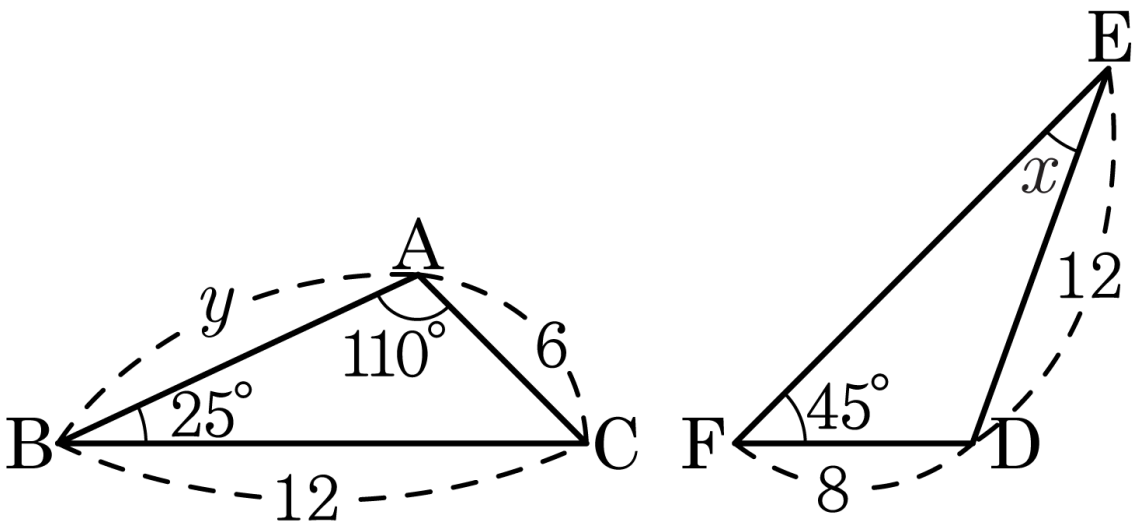
⑤ $\overline{AB} = 15\,\text{cm}$, $\overline{DF} = 12\,\text{cm}$

5. 다음 그림에서 x의 값은?



① 11 ② 13 ③ 14 ④ 15 ⑤ 21

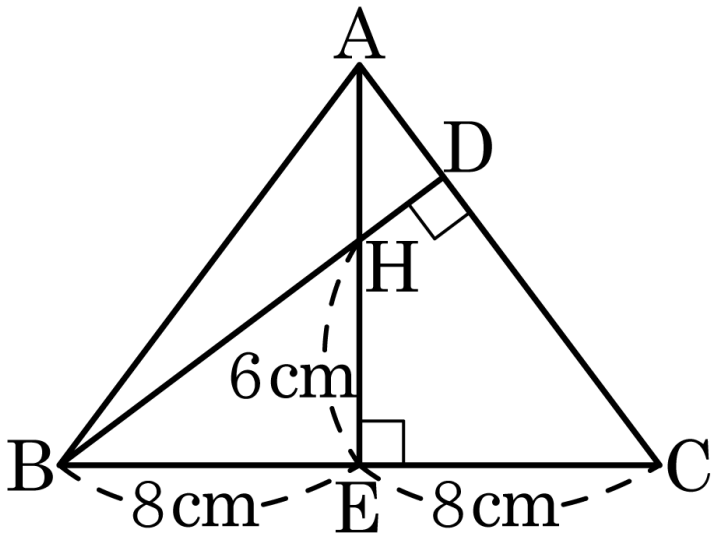
6. 다음 그림에서 $\triangle ABC$ 와 $\triangle DEF$ 는 닮은 도형이다. x, y 의 값을 차례로 구한 것은?



① $45°, 6$ ② $45°, 9$ ③ $25°, 9$

④ $30°, 9$ ⑤ $45°, 12$

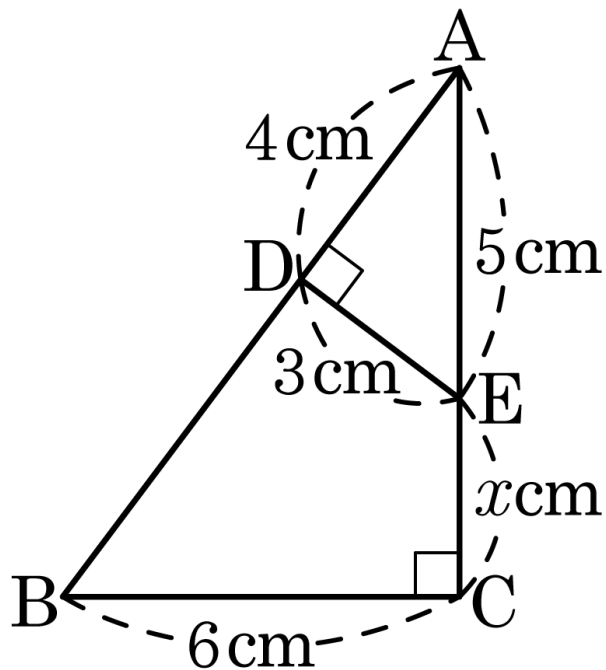
7. $\triangle ABC$ 에서 $\overline{BE} = \overline{CE} = 8\text{cm}$, $\overline{HE} = 6\text{cm}$ 일 때, $\overline{AH}$ 의 길이는?



① 4cm ② $\frac{14}{3}$cm ③ $\frac{16}{3}$cm

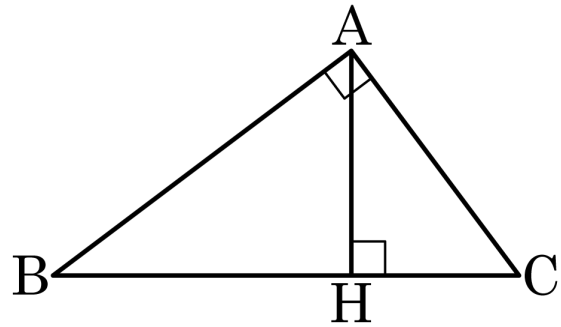
④ 6cm ⑤ $\frac{20}{3}$cm

8. 다음 그림에서 x 의 값은?



① $\frac{1}{2}$ ② $\frac{3}{2}$ ③ $\frac{5}{2}$ ④ 3 ⑤ 4

9. 다음 그림에서 $\angle AHB = \angle BAC = 90°$ 일 때, 다음 중 옳은 것을 고르면?



① $\overline{AB} : \overline{AC} = \overline{BH} : \overline{CH}$

② $\triangle ABC \backsim \triangle HAC$

③ $\angle C = \angle BHA$

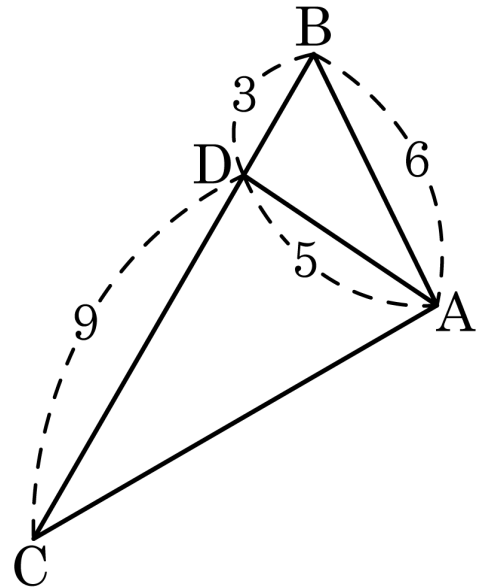
④ $\angle B = \angle ACH$

⑤ $\overline{AH}^2 = \overline{BH} \times \overline{CH}$

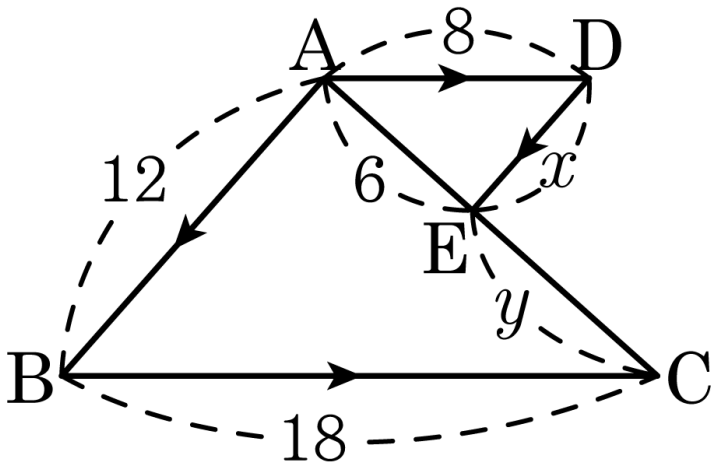
10. 다음 그림에서 $\overline{AC}$ 의 길이는?

① 11 ② 10 ③ 9

④ 8 ⑤ 7

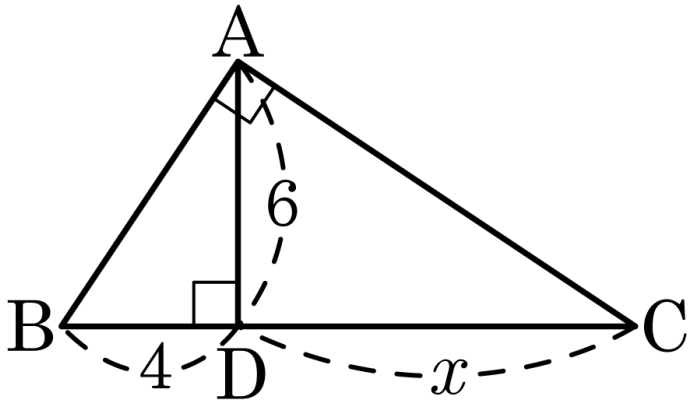


11. 다음 그림에서 $\overline{AD} // \overline{BC}$, $\overline{AB} // \overline{DE}$일 때, 두 수 x, y의 곱 xy의 값을 구하면?



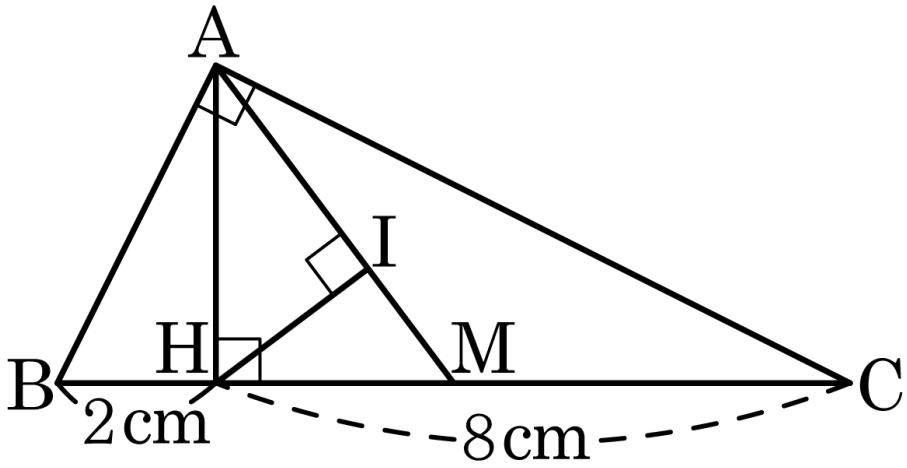
① 38 ② 40 ③ 42 ④ 48 ⑤ 52

12. 다음 그림에서 선분 CD의 길이는?



① 5 ② 7 ③ 9 ④ 9.5 ⑤ 10

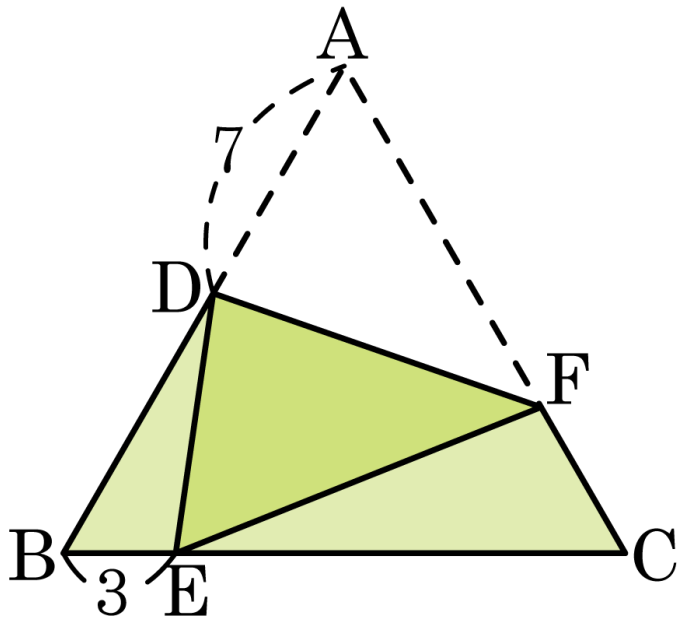
13. 다음 직각삼각형 ABC 에서 점 M 은 $\overline{BC}$ 의 중점이다. $\overline{HI}$ 의 길이는?



① $\frac{12}{5}$cm ② $\frac{13}{5}$cm ③ $\frac{14}{5}$cm

④ $\frac{11}{6}$cm ⑤ $\frac{13}{6}$cm

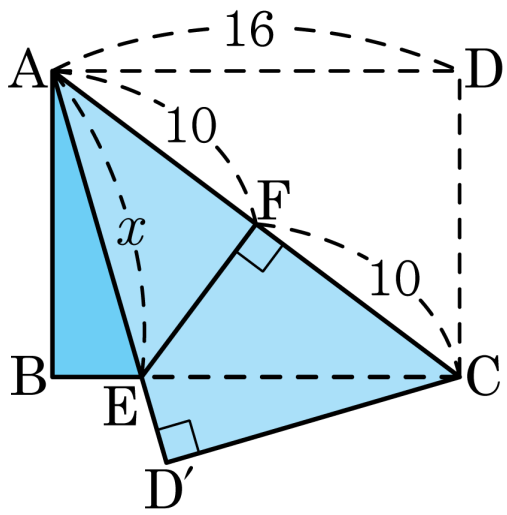
14. 한 변의 길이가 15cm 인 정삼각형의 꼭짓점 A 가 $\overline{BC}$ 위의 점 E 에 겹치게 접었다. $\overline{BE}$ 가 3cm 일 때, $\overline{AF}$ 의 길이를 구하여라.



① $\frac{19}{2}$cm ② $\frac{21}{2}$cm ③ $\frac{23}{2}$cm

④ $\frac{25}{2}$cm ⑤ $\frac{27}{2}$cm

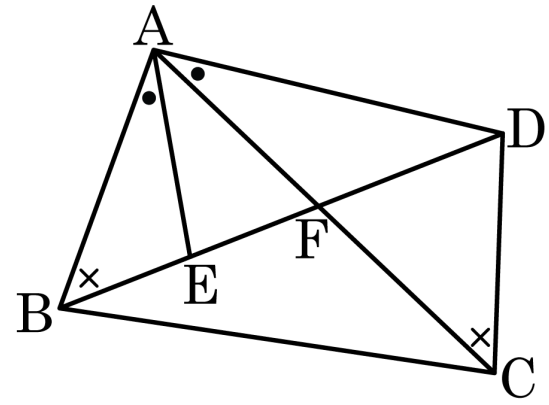
15. 다음 그림과 같이 직사각형 모양의 종이를 대각선 AC 를 접는 선으로 하여 접었다. $\overline{AD'}$ 와 $\overline{BC}$ 의 교점을 E 라하고 점 E 에서 대각선 AC 에 내린 수선의 발을 F 라고 할 때, x 의 길이는?



① $\frac{11}{2}$ ② $\frac{25}{2}$ ③ $\frac{31}{2}$

④ $\frac{33}{2}$ ⑤ $\frac{35}{2}$

16. $\angle ABE = \angle ACD$, $\angle BAE = \angle CAD$ 일 때, 다음 <보 기> 중 닮은 도형끼리 옳게 짝지은 것은?



보기

㉠ $\triangle ABC \backsim \triangle AED$
㉡ $\triangle AEF \backsim \triangle DFC$
㉢ $\triangle AFD \backsim \triangle CFB$
㉣ $\triangle ABF \backsim \triangle ADE$
㉤ $\triangle ABC \backsim \triangle ADC$
㉥ $\triangle ABE \backsim \triangle ACD$

① ㉠, ㉥ ② ㉡, ㉥ ③ ㉢, ㉥ ④ ㉣, ㉥ ⑤ ㉡, ㉣