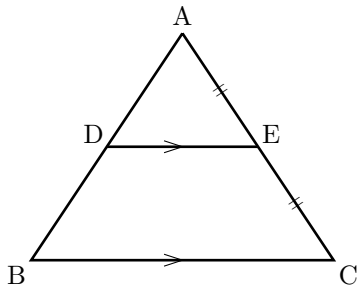


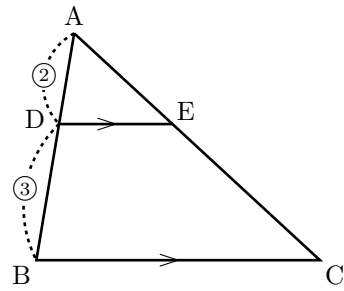
反射テスト 相似と線分比 三角形と平行線 01

1. 下図に指定された線分比を書き込め。(S級 35 秒, A級 50 秒, B級 1 分 20 秒, C級 2 分)

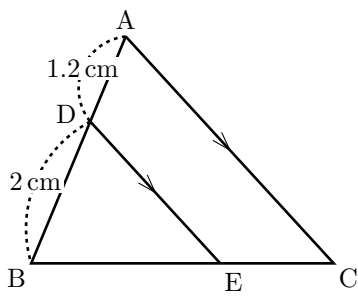
(1) $DE : BC$.



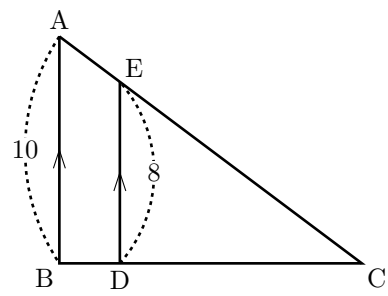
(2) $DE : BC$.



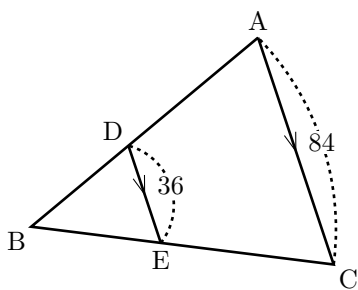
(3) $DE : AC$.



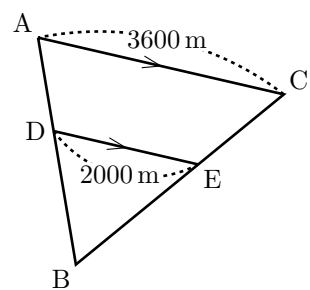
(4) $AE : EC$.



(5) $BE : EC$.

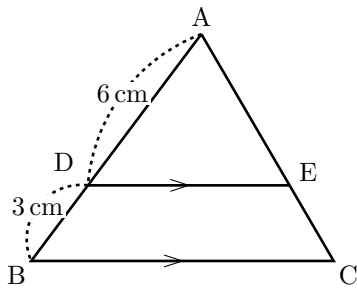


(6) $AD : DB$.

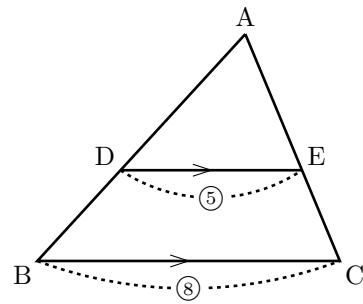


2. 下図に指定された線分比を書き込め. (*S* 級 35 秒, *A* 級 50 秒, *B* 級 1 分 20 秒, *C* 級 2 分)

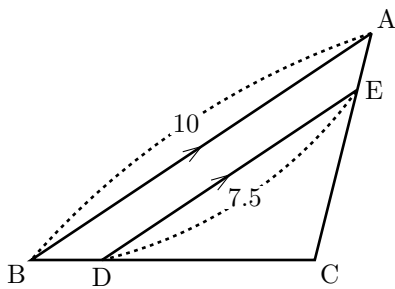
(1) $DE : BC$.



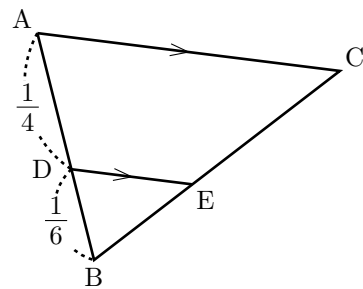
(2) $AE : EC$.



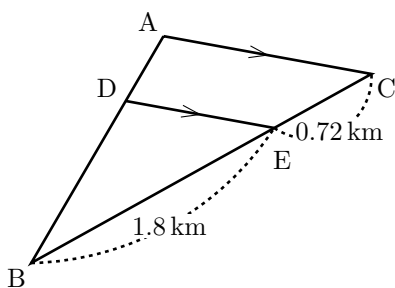
(3) $BD : DC$.



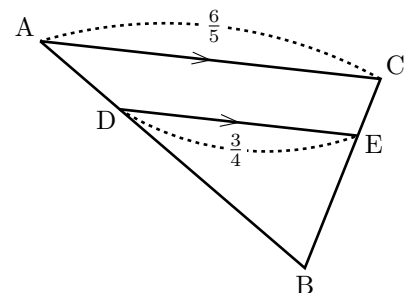
(4) $AC : DE$.



(5) $AC : DE$.



(6) $AD : DB$.

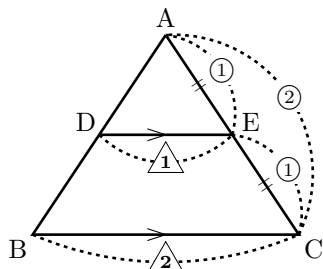


反射テスト 相似と線分比 三角形と平行線 01 解答解説

1. 下図に指定された線分比を書き込め。(S級 35 秒, A級 50 秒, B級 1 分 20 秒, C級 2 分)

★ 直線図形の基本は三角形 (最重要格言)

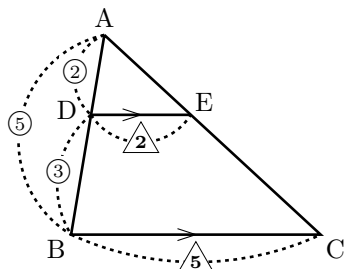
(1) $DE : BC$.



$$\triangle ADE \sim \triangle ABC$$

$$\text{相似比は } AE : AC = 1 : (1 + 1) = 1 : 2$$

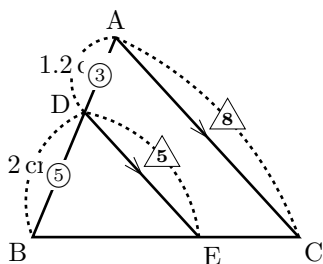
(2) $DE : BC$.



$$\triangle ADE \sim \triangle ABC$$

$$\text{相似比は } AD : AB = 2 : (2 + 3) = 2 : 5$$

(3) $DE : AC$.

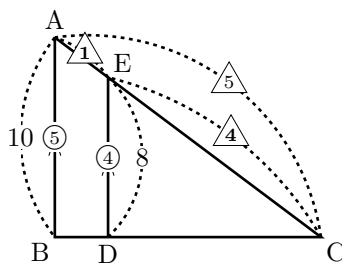


$$2 : 1.2 = 20 : 12 = 5 : 3$$

$$\triangle BED \sim \triangle BCA$$

$$\text{相似比は } BD : BA = 5 : (5 + 3) = 5 : 8$$

(4) $AE : EC$.



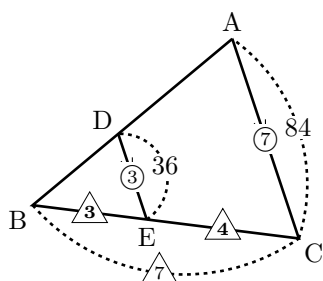
$$\triangle CED \sim \triangle CAB$$

$$\text{相似比は } ED : AB = 8 : 10 = 4 : 5$$

$$\therefore CE : CA = 4 : 5$$

$$\Rightarrow CE : EA = 4 : (5 - 4) = 4 : 1$$

(5) $BE : EC$.



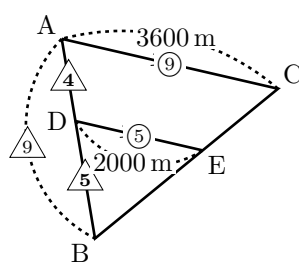
$$\triangle BED \sim \triangle BCA$$

$$\text{相似比は } ED : CA = 36 : 84 = 3 : 7$$

$$\therefore BE : BC = 3 : 7$$

$$\Rightarrow BE : EC = 3 : (7 - 3) = 3 : 4$$

(6) $AD : DB$.



$$\triangle BED \sim \triangle BCA$$

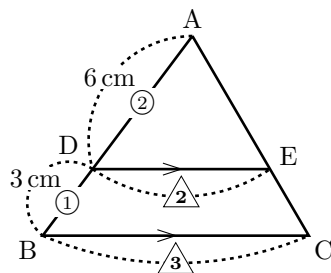
$$\text{相似比は } ED : CA = 2000 : 3600 = 5 : 9$$

$$\therefore BD : BA = 5 : 9$$

$$\Rightarrow BD : DA = 5 : (9 - 5) = 5 : 4$$

2. 下図に指定された線分比を書き込め。(S級 35 秒, A級 50 秒, B級 1 分 20 秒, C級 2 分)

(1) DE : BC .



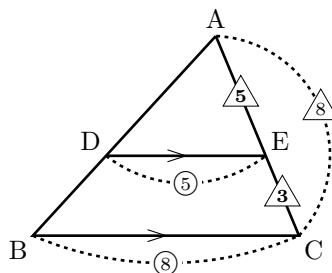
$$6 : 3 = \textcircled{2} : \textcircled{1}$$

$$\triangle ADE \sim \triangle ABC$$

$$\text{相似比は } AE : AC = \textcircled{2} : (\textcircled{2} + \textcircled{1}) = 2 : 3$$

$$\text{よって } DE : BC = 2 : 3$$

(2) AE : EC .



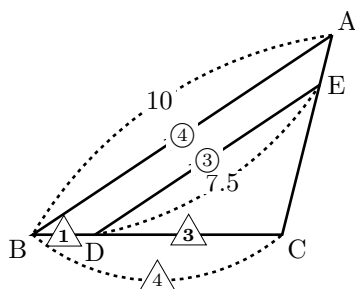
$$\triangle ADE \sim \triangle ABC$$

$$\text{相似比は } DE : BC = \textcircled{5} : \textcircled{8}$$

$$\therefore AE : AC = \textcircled{5} : \textcircled{8}$$

$$\Rightarrow AE : EC = \textcircled{5} : (\textcircled{8} - \textcircled{5}) = 5 : 3$$

(3) BD : DC .



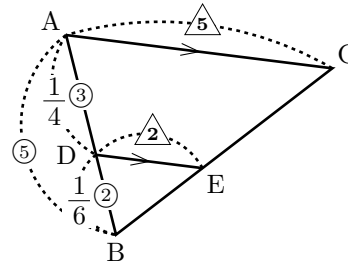
$$\triangle CED \sim \triangle CAB$$

$$\text{相似比は } ED : AB = 7.5 : 10 = 75 : 100 = \textcircled{3} : \textcircled{4}$$

$$\therefore CD : CB = \textcircled{3} : \textcircled{4}$$

$$\Rightarrow CD : DB = \textcircled{3} : (\textcircled{4} - \textcircled{3}) = 3 : 1$$

(4) AC : DE .



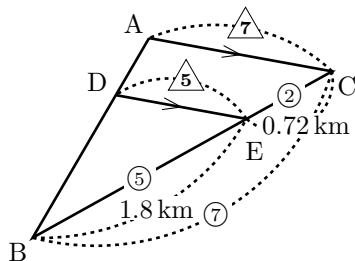
$$\frac{1}{4} : \frac{1}{6} = 6 : 4 = \textcircled{3} : \textcircled{2}$$

$$\triangle BED \sim \triangle BCA$$

$$\text{相似比は } BD : BA = \textcircled{2} : (\textcircled{2} + \textcircled{3}) = 2 : 5$$

$$\text{よって } ED : CA = 2 : 5$$

(5) AC : DE .



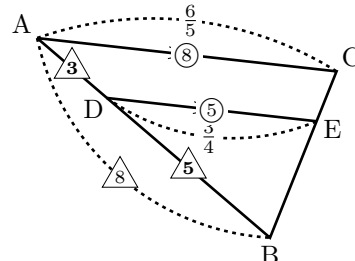
$$1.8 : 0.72 = 180 : 72 = \textcircled{5} : \textcircled{2}$$

$$\triangle BED \sim \triangle BCA$$

$$\text{相似比は } BE : BC = \textcircled{5} : (\textcircled{5} + \textcircled{2}) = 5 : 7$$

$$\text{よって } ED : CA = 5 : 7$$

(6) AD : DB .



$$\triangle BED \sim \triangle BCA$$

$$\text{相似比は } ED : CA = \frac{3}{4} : \frac{6}{5} = 15 : 24 = \textcircled{5} : \textcircled{8}$$

$$\therefore BD : BA = \textcircled{5} : \textcircled{8}$$

$$\Rightarrow BD : DA = \textcircled{5} : (\textcircled{8} - \textcircled{5}) = 5 : 3$$