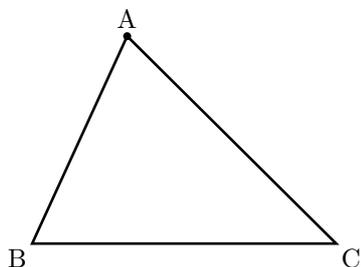


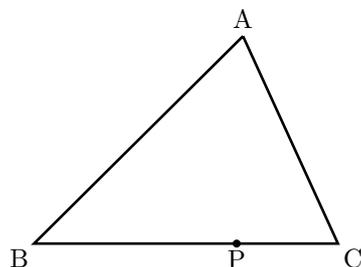
反射テスト 面積の2等分線 三角形 01

1. 下図の三角形の面積を2等分する直線をかけ. ただし, どれも必ず点Pを通るものとする. また, わかる線分比もかきこめ.
(S級1分10秒, A級2分30秒, B級4分, C級6分)

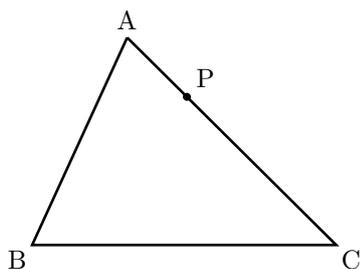
(1) 点Pは点A



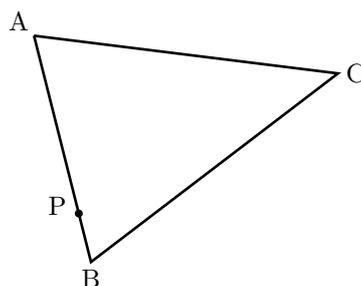
(2) $BP : PC = 2 : 1$



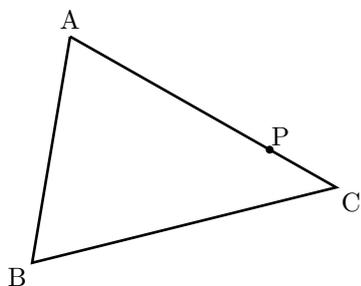
(3) $AP : PC = 2 : 5$



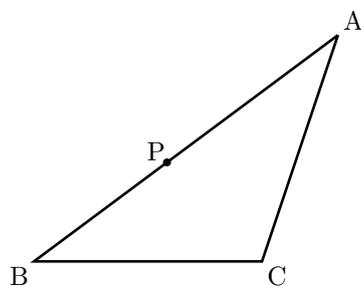
(4) $AP = 33 \text{ cm}, PB = 9 \text{ cm}$



(5) $AP = 2, PC = \frac{2}{3}$

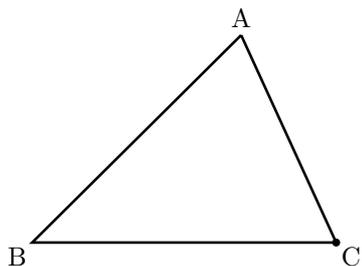


(6) $AP = 12.6, PB = 9.8$

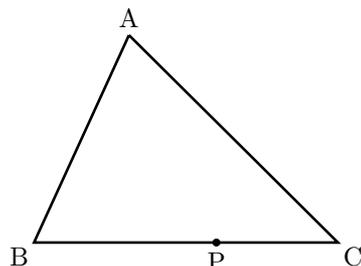


2. 下図の三角形の面積を2等分する直線をかけ. ただし, どれも必ず点Pを通るものとする. また, わかる線分比もかきこめ.
 (S 級 1 分 10 秒, A 級 2 分 30 秒, B 級 4 分, C 級 6 分)

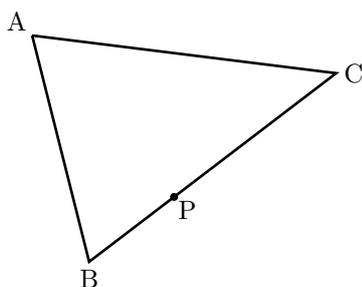
(1) 点Pは点C



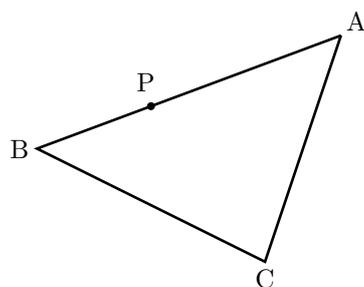
(2) $BP : PC = 3 : 2$



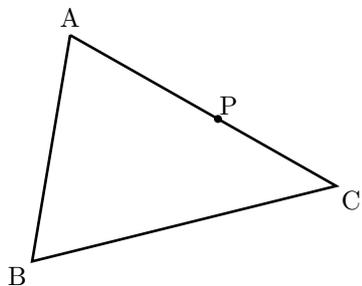
(3) $BP : PC = 11 : 21$



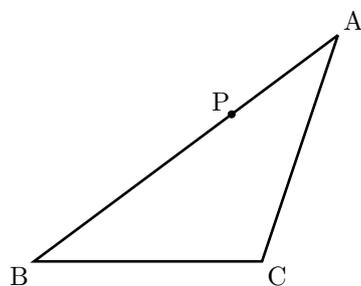
(4) $AP = 30 \text{ cm}, PB = 18 \text{ cm}$



(5) $AP : PC = \frac{4}{5} : 0.7$

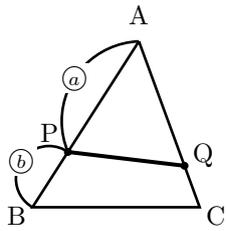


(6) $AP = 1\frac{3}{4}, PB = 3.75$



反射テスト 面積の2等分線 三角形 01 解答解説

1. 下図の三角形の面積を2等分する直線をかけ. ただし, どれも必ず点Pを通るものとする. また, わかる線分比もかきこめ.
(S級1分10秒, A級2分30秒, B級4分, C級6分)



★ 三角形の面積の二等分

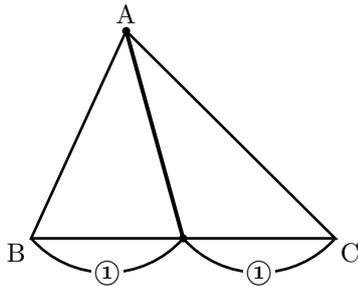
直線PQで△ABCの面積が二等分されるとき,

$$AP : PB = a : b \Rightarrow AQ : QC = (a + b) : (a - b)$$

☆注意 aとbの大きい方がaである.

- (1) 点Pは点A

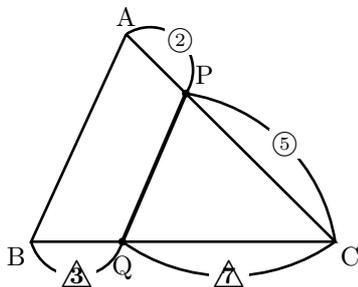
- (2) $BP : PC = 2 : 1$



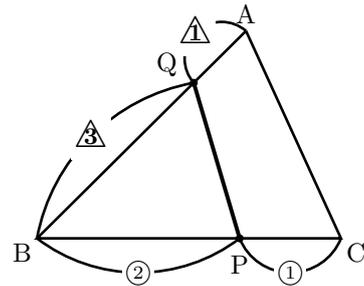
★頂点と対辺の中点を結んで二等分

- (3) $AP : PC = 2 : 5$

- (4) $AP = 33 \text{ cm}, PB = 9 \text{ cm}$



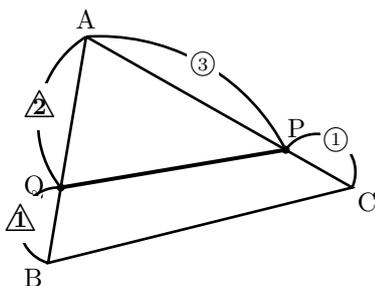
$$CQ : QB = (5 + 2) : (5 - 2) = 7 : 3$$



$$BQ : QA = (2 + 1) : (2 - 1) = 3 : 1$$

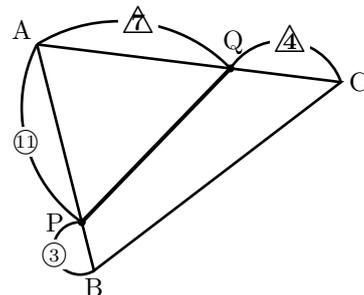
- (5) $AP = 2, PC = \frac{2}{3}$

- (6) $AP = 12.6, PB = 9.8$



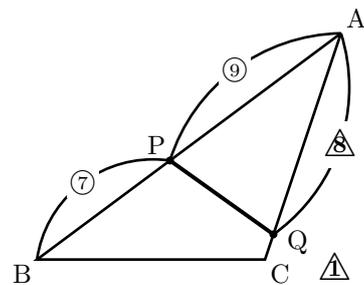
$$AP : PC = 2 : \frac{2}{3} = 6 : 2 = 3 : 1$$

$$AQ : QB = (3 + 1) : (3 - 1) = 4 : 2 = 2 : 1$$



$$AP : PB = 33 : 9 = 11 : 3$$

$$AQ : QC = (11 + 3) : (11 - 3) = 14 : 8 = 7 : 4$$

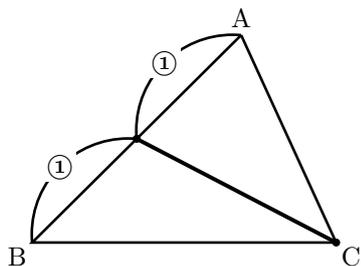


$$AP : PB = 12.6 : 9.8 = 126 : 98 = 63 : 49 = 9 : 7$$

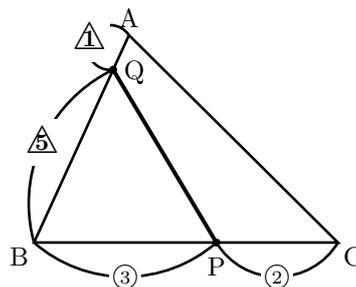
$$AQ : QC = (9 + 7) : (9 - 7) = 16 : 2 = 8 : 1$$

2. 下図の三角形の面積を2等分する直線をかけ. ただし, どれも必ず点Pを通るものとする. また, わかる線分比もかきこめ.
(S級1分10秒, A級2分30秒, B級4分, C級6分)

(1) 点Pは点C



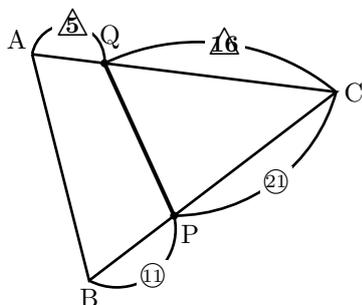
(2) $BP : PC = 3 : 2$



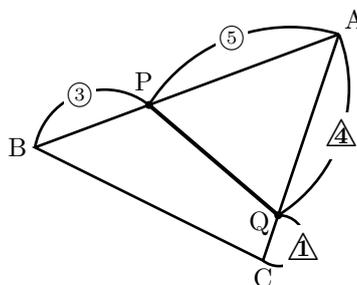
★頂点と対辺の中点を結んで二等分

$$BQ : QA = (3 + 2) : (3 - 2) = 5 : 1$$

(3) $BP : PC = 11 : 21$



(4) $AP = 30 \text{ cm}, PB = 18 \text{ cm}$



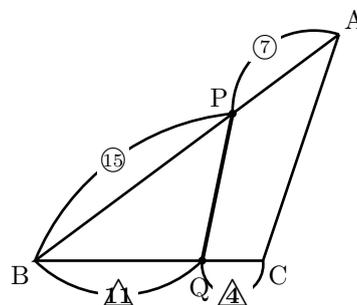
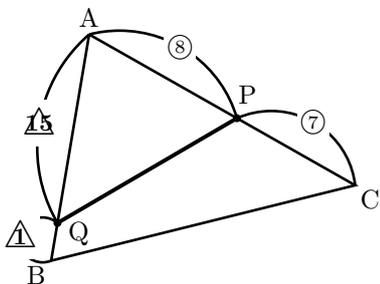
$$CQ : QA = (21 + 11) : (21 - 11) = 32 : 10 = 16 : 5$$

$$AP : PB = 30 : 18 = 5 : 3$$

$$AQ : QC = (5 + 3) : (5 - 3) = 8 : 2 = 4 : 1$$

(5) $AP : PC = \frac{4}{5} : 0.7$

(6) $AP = 1\frac{3}{4}, PB = 3.75$



$$AP : PC = 0.8 : 0.7 = 8 : 7$$

$$AQ : QB = (8 + 7) : (8 - 7) = 15 : 1$$

$$BP : PA = 3\frac{3}{4} : \frac{7}{4} = 15 : 7$$

$$BQ : QC = (15 + 7) : (15 - 7) = 22 : 8 = 11 : 4$$