

선분의 내분점과 외분점

(The internal division and the external division of a line segment)

The internal division and the external division of a line segment

▶ Start

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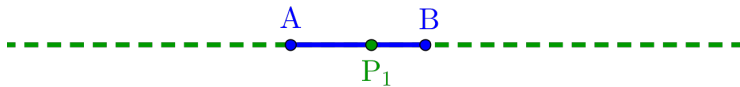
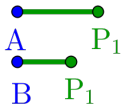
$$\overline{AP} : \overline{BP} = 3 : 2$$



The internal division and the external division of a line segment

▶ Start

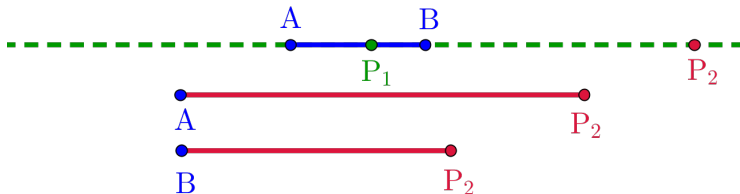
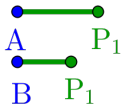
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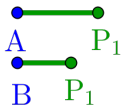
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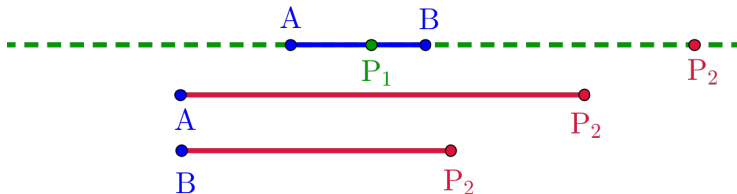
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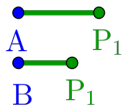
Internal Division



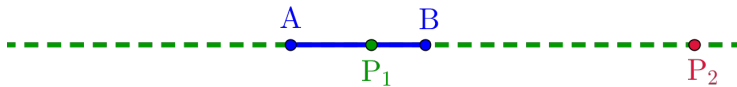
The internal division and the external division of a line segment

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$$\overline{AP} : \overline{BP} = 3 : 2$$



Internal Division

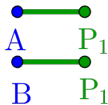


External Division

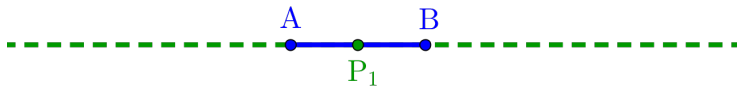
The internal division and the external division of a line segment

▶ Start

$$\overline{AP} : \overline{BP} = 1 : 1$$



Internal Division



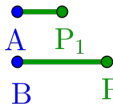
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A
•
B

External Division

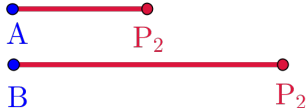
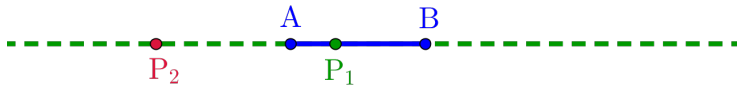
The internal division and the external division of a line segment

▶ Start

$$\overline{AP} : \overline{BP} = 1 : 2$$



Internal Division

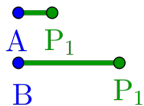


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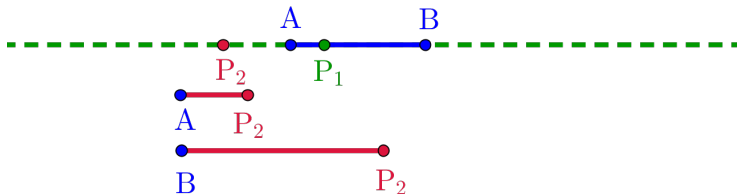
The internal division and the external division of a line segment

▶ Start

$$\overline{AP} : \overline{BP} = 1 : 3$$



Internal Division

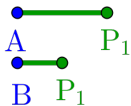


External Division

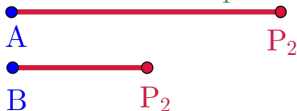
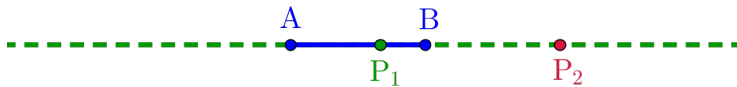
The internal division and the external division of a line segment

▶ Start

$$\overline{AP} : \overline{BP} = 2 : 1$$



Internal Division

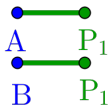


External Division

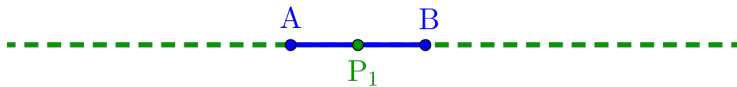
The internal division and the external division of a line segment

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$$\overline{AP} : \overline{BP} = 2 : 2$$



Internal Division



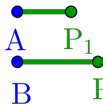
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A
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B

External Division

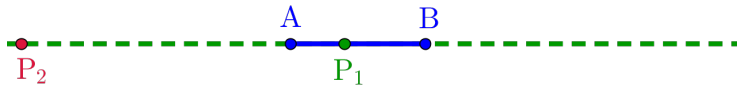
The internal division and the external division of a line segment

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$$\overline{AP} : \overline{BP} = 2 : 3$$



Internal Division

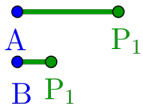


External Division

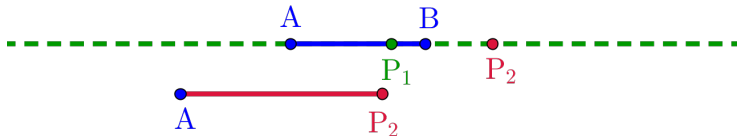
The internal division and the external division of a line segment

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$$\overline{AP} : \overline{BP} = 3 : 1$$



Internal Division

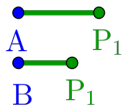


External Division

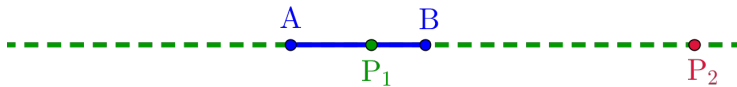
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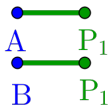


External Division

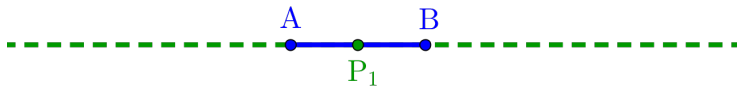
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$$\overline{AP} : \overline{BP} = 3 : 3$$



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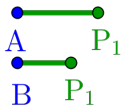


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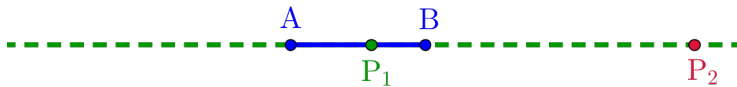
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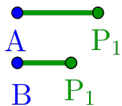


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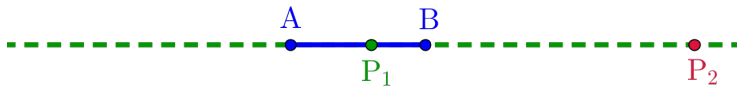
The internal division and the external division of a line segment

▶ Home

$$\overline{AP} : \overline{BP} = 3 : 2$$



Internal Division



External Division

The internal division and the external division of a line segment

Theorem

수직선 위의

Theorem

수직선 위의 두 점 $A(x_1)$, $B(x_2)$ 에 대하여

Theorem

수직선 위의 두 점 $A(x_1)$, $B(x_2)$ 에 대하여 \overline{AB} 를

Theorem

수직선 위의 두 점 $A(x_1)$, $B(x_2)$ 에 대하여 \overline{AB} 를 $m : n$ 으로

Theorem

수직선 위의 두 점 $A(x_1)$, $B(x_2)$ 에 대하여 \overline{AB} 를 $m : n$ 으로

(1) 내분하는 점

Theorem

수직선 위의 두 점 $A(x_1)$, $B(x_2)$ 에 대하여 \overline{AB} 를 $m : n$ 으로

(1) 내분하는 점 $P_1 \left(\frac{mx_2 + nx_1}{m + n} \right)$

Theorem

수직선 위의 두 점 $A(x_1)$, $B(x_2)$ 에 대하여 \overline{AB} 를 $m : n$ 으로

(1) 내분하는 점 $P_1 \left(\frac{mx_2 + nx_1}{m + n} \right)$

(2) 외분하는 점

Theorem

수직선 위의 두 점 $A(x_1)$, $B(x_2)$ 에 대하여 \overline{AB} 를 $m : n$ 으로

(1) 내분하는 점 $P_1 \left(\frac{mx_2 + nx_1}{m + n} \right)$

(2) 외분하는 점 $P_2 \left(\frac{mx_2 - nx_1}{m - n} \right)$

Theorem

수직선 위의 두 점 $A(x_1)$, $B(x_2)$ 에 대하여 \overline{AB} 를 $m : n$ 으로

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Theorem

수직선 위의 두 점 $A(x_1)$, $B(x_2)$ 에 대하여 \overline{AB} 를 $m : n$ 으로

- (1) 내분하는 점 $P_1 \left(\frac{mx_2 + nx_1}{m + n} \right)$
- (2) 외분하는 점 $P_2 \left(\frac{mx_2 - nx_1}{m - n} \right)$ ($m \neq n$)

Theorem

좌표평면 위의

Theorem

수직선 위의 두 점 $A(x_1)$, $B(x_2)$ 에 대하여 \overline{AB} 를 $m : n$ 으로

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좌표평면 위의 두 점 $A(x_1, y_1)$, $B(x_2, y_2)$ 에 대하여

Theorem

수직선 위의 두 점 $A(x_1), B(x_2)$ 에 대하여 \overline{AB} 를 $m : n$ 으로

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- (1) 내분하는 점

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- (2) 외분하는 점 $P_2 \left(\frac{mx_2 - nx_1}{m - n}, \frac{my_2 - ny_1}{m - n} \right)$

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