

円の接線の長さ

$$r^2 + \ell^2 = d^2(\text{斜辺})$$

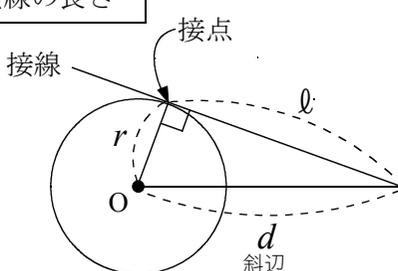
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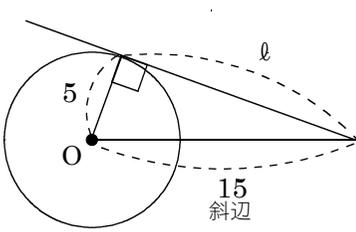
直角をつくる一辺の長さの求め方

$$\ell = \sqrt{d^2 - r^2}$$

斜辺の長さの求め方

$$d = \sqrt{\ell^2 + r^2}$$





解き方①

$$5^2 + \ell^2 = 15^2$$

$$25 + \ell^2 = 225$$

$$\ell^2 = 200$$

$$\ell = 10\sqrt{2}$$

解き方②

$$\ell = \sqrt{15^2 - 5^2}$$

$$\ell = \sqrt{225 - 25}$$

$$\ell = \sqrt{200}$$

$$\ell = 10\sqrt{2}$$

円の弦ABの長さ

$$d^2 + \ell^2 = r^2(\text{斜辺})$$

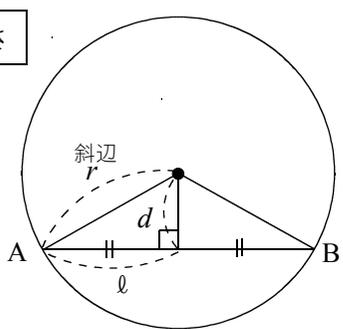
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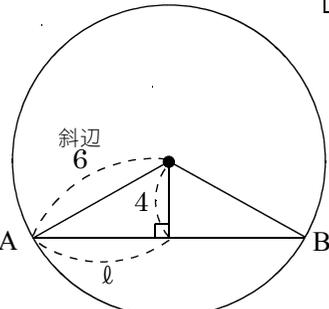
直角をつくる一辺の長さの求め方

$$\ell = \sqrt{r^2 - d^2}$$

⇩

$$\text{弦 AB} = 2\ell$$





解き方①

$$4^2 + \ell^2 = 6^2$$

$$16 + \ell^2 = 36$$

$$\ell^2 = 20$$

$$\ell = 2\sqrt{5}$$

$$\text{AB} = 4\sqrt{5} \leftarrow \times 2$$

解き方②

$$\ell = \sqrt{6^2 - 4^2}$$

$$\ell = \sqrt{36 - 16}$$

$$\ell = \sqrt{20}$$

$$\ell = 2\sqrt{5}$$

$$\text{AB} = 4\sqrt{5} \leftarrow \times 2$$