# Contents

# 1 Hyperlink

A reference to the link defined later.

# 2 Code Snippet Example

```
type Figure struct {
        Target        string
        Path        string                `json:path`
        Caption        string               `json:caption`
        Label        string                `json:label`
        Options        map[string]string        `json:options`
        Place        string                `json:place`
        Suffix  map[string]string
}

const latexTemplate = `
\begin{figure}[{{.Place}}]
  \centering
  \includegraphics[%
      {{.Options | stringify}}]%
      {{"{"}}{{.Path}}{{index .Suffix .Target}}{{"}"}}
  \caption{{"{"}}{{.Caption}}{{"}"}}
  \label{{"{fig:"}}{{.Label}}{{"}"}}
\end{figure}
`
```

# 3 amsthm Example

## 3.1 Circle

**Definition 3.1** (Plane)**.** In mathematics, a plane is a flat, two-dimensional surface that extends infinitely far.

**Definition 3.2** (Circle)**.** A circle is a shape consisting of all points in a plane that are a given distance from a given point, the centre; equivalently it is the curve traced out by a point that moves in a plane so that its distance from a given point is constant.

### 3.2 Chord and tangent line

**Definition 3.3** (Chord)**.** A line segment whose endpoints lie on the circle, thus dividing a circle in two sements.

**Definition 3.4** (Tangent line)**.** A tangent line to a circle is a line that touches the circle at exactly one point, never entering the circle's interior.

## 4 Figure Example

### 4.1 Tangent Line

See Fig. 1, We have a theorem about tangent line to a circle:

**Theorem 4.1** (Tangent line to a circle)**.** A line is tangent to a circle, if and only if the line is perpendicular to the radius drawn to the point of tangency.

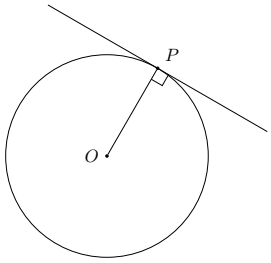


Figure 1: Tangent line to a circle

### 4.2 Inscribed angle and central angle

With the code block below:

```
```{.figure}
{
    "path"    : "Figures/inscribed_angle",
    "caption" : "Inscribed Angle and Central Angle",
    "label"   : "insc",
    "options" : {"scale" : "1"},
```
```

```
    "place"    : "ht"
}
```

We get:

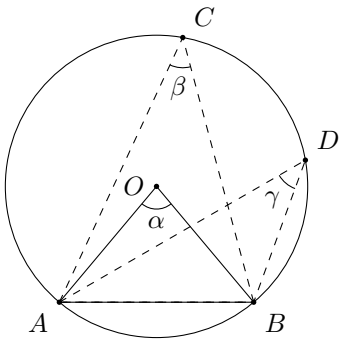


Figure 2: Inscribed Angle and Central Angle

### 4.3 AMC8

Test 4 Question 25: Fig. 3

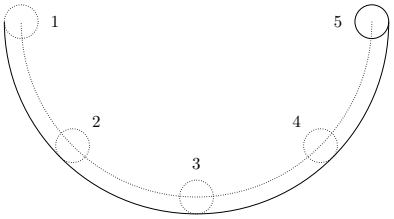


Figure 3: Test4 Q25

## 5 Figures example

### 5.1 PNG

With `![My\ toolboxes](Figures/toolboxes.png){#fig:tbx ratio=1.025}`, we get Fig. 4:


Figure 4: My toolboxes

### 5.2 PDF

For including PDF (e.g. generated from Tikz) see Fig. 3 and Fig. 2

## 6 TEX example

This is a link that has been referenced at the beginning of this document.

TEX is great!

$$f(x) = x^2$$
$$g(x) = \frac{1}{x}$$
$$F(x) = \int_b^a \frac{1}{3}x^3$$