Color roles & Style

Color roles 🔗

There are 26 standard color roles organized into six groups: primary, secondary, tertiary, error, surface, and outline

- **Color roles ensure accessibility**
 The color system is built on accessible color pairings. These color pairs provide an accessible minimum 3:1 contrast.

General concepts 🔗

Here are helpful-to-know words you'll see in the names of color roles:

- **Surface** – A role used for backgrounds and large, low-emphasis areas of the screen.
- **Primary, Secondary, Tertiary** – Accent color roles used to emphasize or de-emphasize foreground elements.
- **Container** – Roles used as a fill color for foreground elements like buttons. They should not be used for text or icons.
- **On** – Roles starting with this term indicate a color for text or icons *on top* of its paired parent color. For example, **on primary** is used for text and icons against the **primary** fill color.
- **Variant** – Roles ending with this term offer a lower emphasis alternative to its non-variant pair. For example, **outline variant** is a less emphasized version of the **outline** color.

Pairing and layering colors 🔗
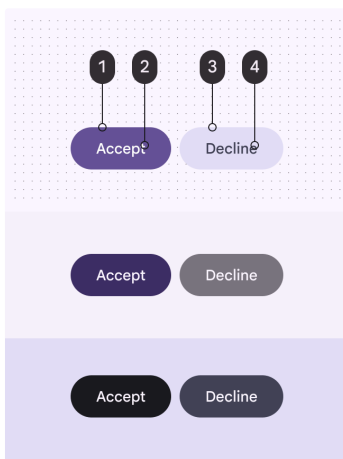
Pair and layer color roles as intended to ensure expected visual results and accessibility. In this example, the two buttons mapped with (1) **primary**, (2) **on primary**, (3) **secondary container**, and (4) **on secondary container** stay legible as the contrast level changes.
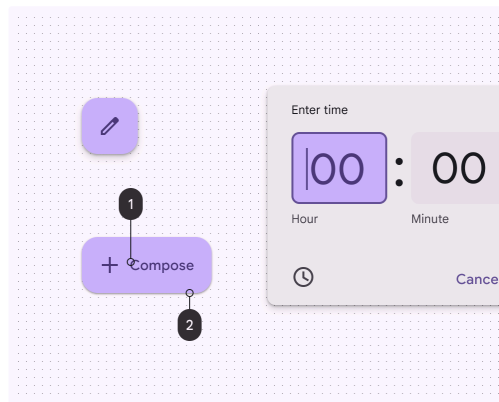
Primary 🔗

Use primary roles for the most prominent components across the UI, such as the FAB, high-emphasis buttons, and active states.

- **Primary** – High-emphasis fills, texts, and icons against surface

- **On primary** – **Text and icons** against primary

- **Primary container** – Standout **fill color** against surface, for key components like **FAB**

- **On primary container** – **Text and icons** against primary container

Primary	Primary Container
On Primary	On Primary Container
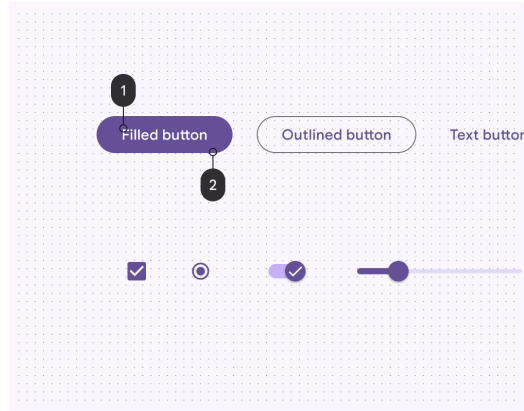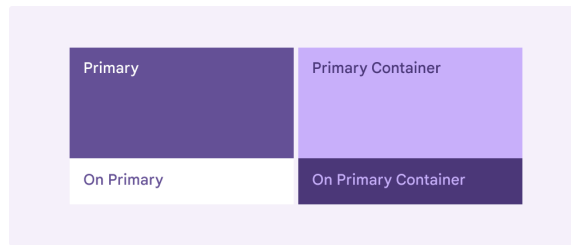
1.On Primary
2.primary

1. On Primary Container
2.Primary Container

Secondary 🔗

Use secondary roles for less prominent components in the UI, such as **filter** chips.

There are four secondary roles:

- **Secondary** – Less prominent fills, text, and icons against surface

- **On secondary** – Text and icons against secondary

- **Secondary container** – Less prominent fill color against surface, for recessive components like tonal buttons

- **On secondary container** – Text and icons against secondary container

Tertiary 🔗

Use tertiary roles for contrasting accents that balance primary and secondary colors or bring heightened attention to an element such as an **input field.**

There are four tertiary roles:

- **Tertiary** – Complementary fills, text, and icons against surface

- **On tertiary** – Text and icons against tertiary

- **Tertiary container** – Complementary container color against surface, for components like input fields

- **On tertiary container** – Text and icons against tertiary container

Error 🔗

Use error roles to communicate error states, such as an **incorrect password** entered into a text field.

There are four error roles:

- **Error** – Attention-grabbing color against surface for fills, icons, and text, indicating urgency

- **On error** – Text and icons against error

- **Error container** – Attention-grabbing fill color against surface

- **On error container** – Text and icons against error container

Error is an example of a static color (it doesn't change even in dynamic color schemes). Error color roles are made static by default with any dynamic color scheme.
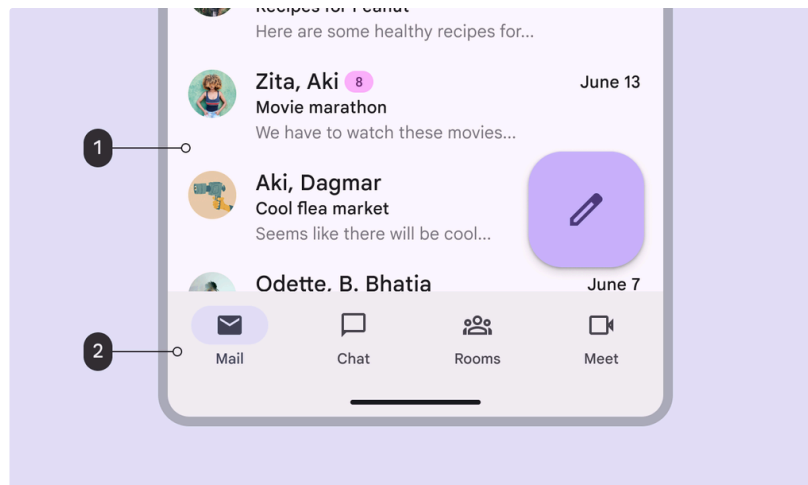
Surface 🔗

Use surface roles for more neutral backgrounds, and container colors for components **like cards, sheets, and dialogs.**
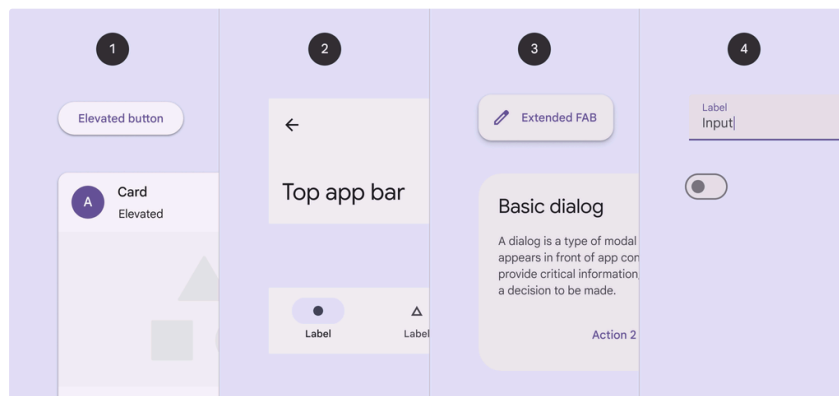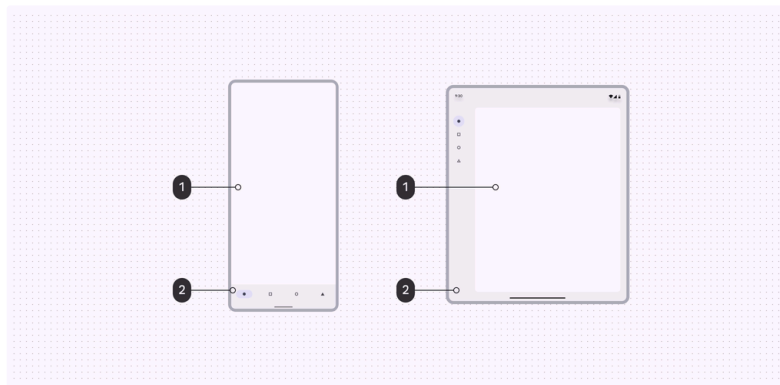
There are three surface roles:

- **Surface** – Default color for backgrounds

- **On surface** – Text and icons against any surface color

- **On surface variant** – Lower-emphasis color for text and icons against any surface color

There are also **five surface container** roles named based on their level of emphasis:Read More

The most common combination of surface roles uses **surface** for a background area and **surface container** for a navigation area.

Recipes for Peanut
Here are some healthy recipes for...

Zita, Aki 8   June 13
Movie marathon
We have to watch these movies...

Aki, Dagmar
Cool flea market
Seems like there will be cool...

Odette, B. Bhatia   June 7

Mail   Chat   Rooms   Meet

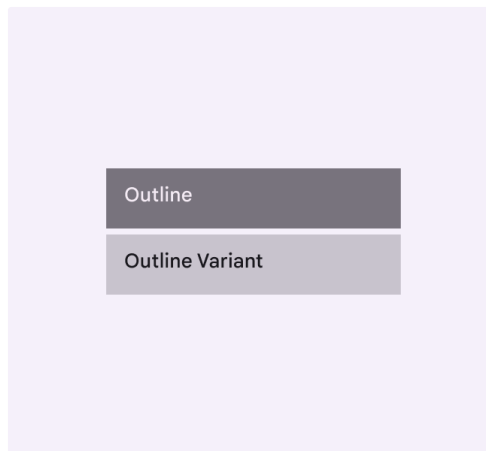1. Surface
2.Surface container

Default surface container roles applied to components:

1. **Surface container low**

2. **Surface container**

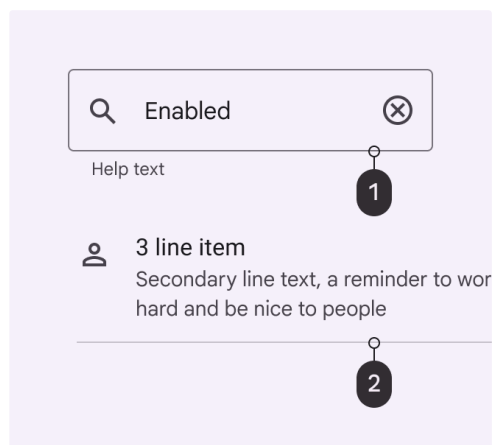3. **Surface container high**

4. **Surface container highest**

Outline 🔗

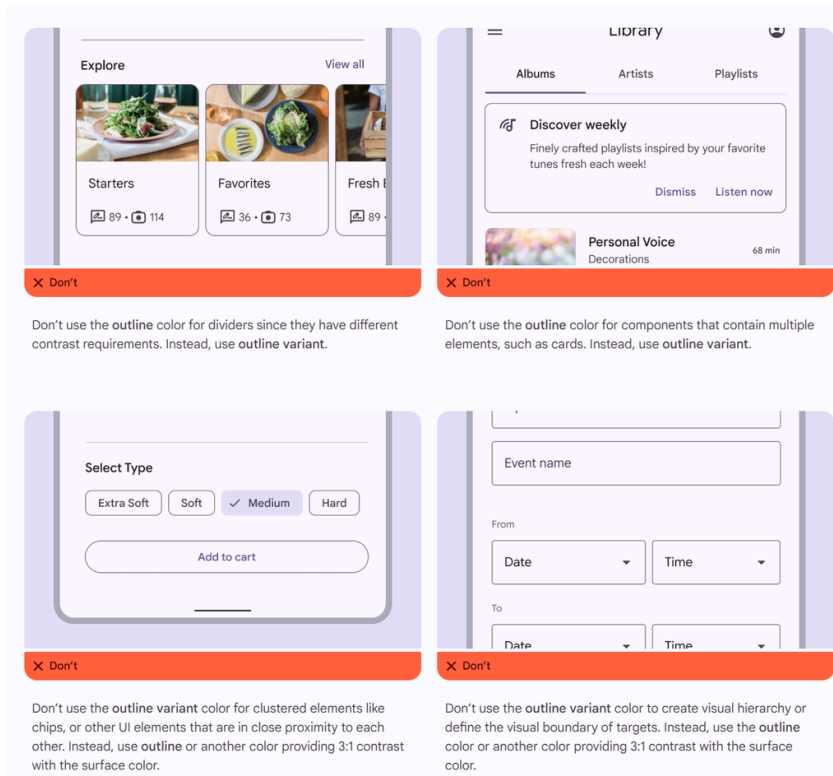There are two outline colors to be used against surface:

- **Outline** – Important boundaries, such as a text field outline

- **Outline variant** – Decorative elements, such as dividers
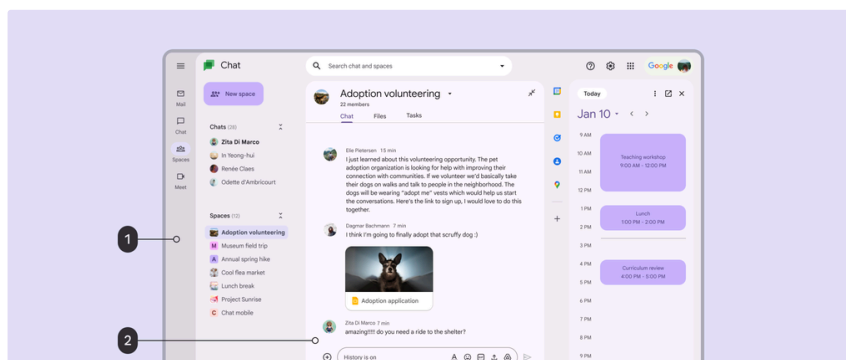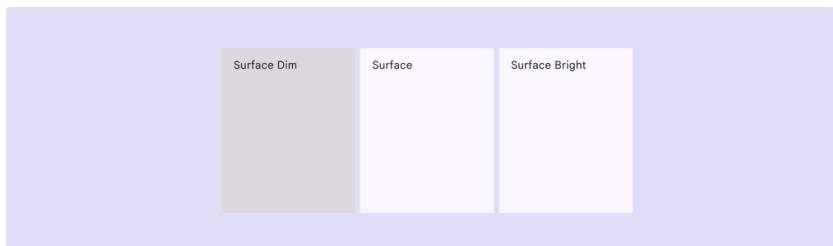

**Outline** and **outline variant** roles in the color scheme, shown in light theme

1. A text field which uses **outline** for its container border
2. A list item which uses **outline variant** for its divider line

✕ Don't

Don't use the **outline** color for dividers since they have different contrast requirements. Instead, use **outline variant**.

✕ Don't

Don't use the **outline** color for components that contain multiple elements, such as cards. Instead, use **outline variant**.

✕ Don't

Don't use the **outline variant** color for clustered elements like chips, or other UI elements that are in close proximity to each other. Instead, use **outline** or another color providing 3:1 contrast with the surface color.

✕ Don't

Don't use the **outline variant** color to create visual hierarchy or define the visual boundary of targets. Instead, use the **outline** color or another color providing 3:1 contrast with the surface color.

Bright and dim surface roles

1. Navigation rail with surface dim background
2. Chat window with surface bright background
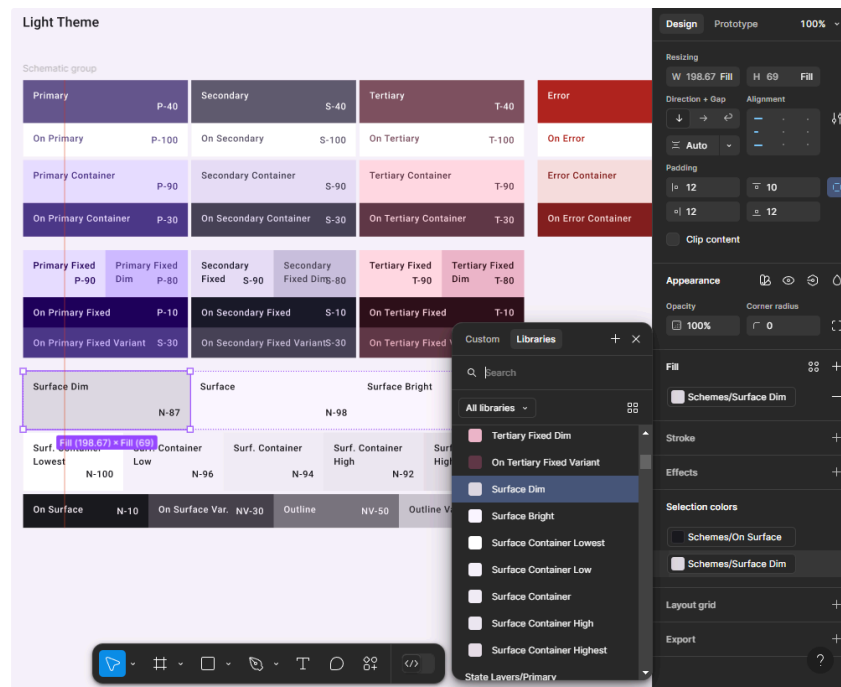
Elevation 🔗

Elevation is the distance between two surfaces on the z-axis

- Elevation applies to all surfaces and components
- Use the default elevation in Material 3 components
- Keep the elevation story simple (not too many levels)
- Show elevation changes by changing surface color
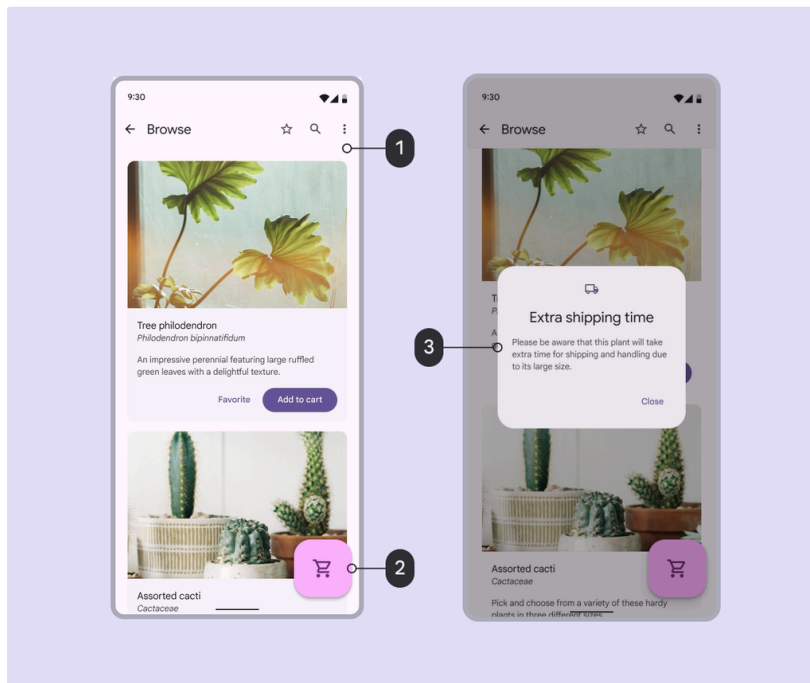
Elevation can be depicted using shadows or other visual cues, such as surface fills with a tone difference
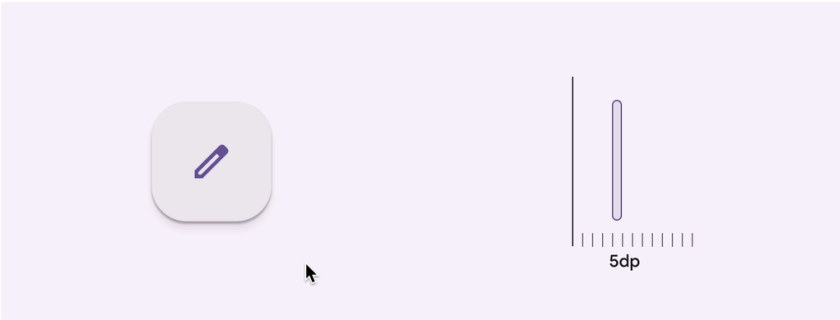
Hovering over a button increases its elevation to show user interaction

[More about applying Elevation](#)

Elevation levels can be implemented with tokens.

Resting level	Component	DP Height
5	(not assigned as resting level)	12dp
4	(not assigned as resting level)	8dp
3	FAB Extended FAB Modal Date Picker Docked Date Picker Modal Date Input Dialog Search Bar Search View Time Picker Time Input	6dp
2	Autocomplete Menu Bottom App Bar Dropdown Menu Menu Navigation Bar Select Menu Rich Tooltip Top App Bar (Scrolled)	3dp
1	Assist Chip (Elevated) Banner Bottom Sheet (Modal) Elevated Button	1dp

0	Elevated Card	
	Extended FAB (Lowered)	
	FAB (Lowered)	
	Filter Chip (Elevated)	
	Navigation Drawer (Modal)	
	Side Sheet (Modal)	
	Slider (Handle)	
	Suggestion Chip (Elevated)	
0	Assist Chip (Flat)	0dp
	Carousel Item	
	Filled Button	
	Filled Tonal Button	
	Filled Card	
	Filter Chip (Flat)	
	Full Screen Dialog	
	List Item	
	Input Chip	
	Navigation Rail	
	Primary Navigation Tabs	
	Secondary Navigation Tabs	
	Outlined Card	
	Side Sheet (Docked)	
	Slider (Track)	
	Suggestion Chip (Flat)	
	Top App Bar	
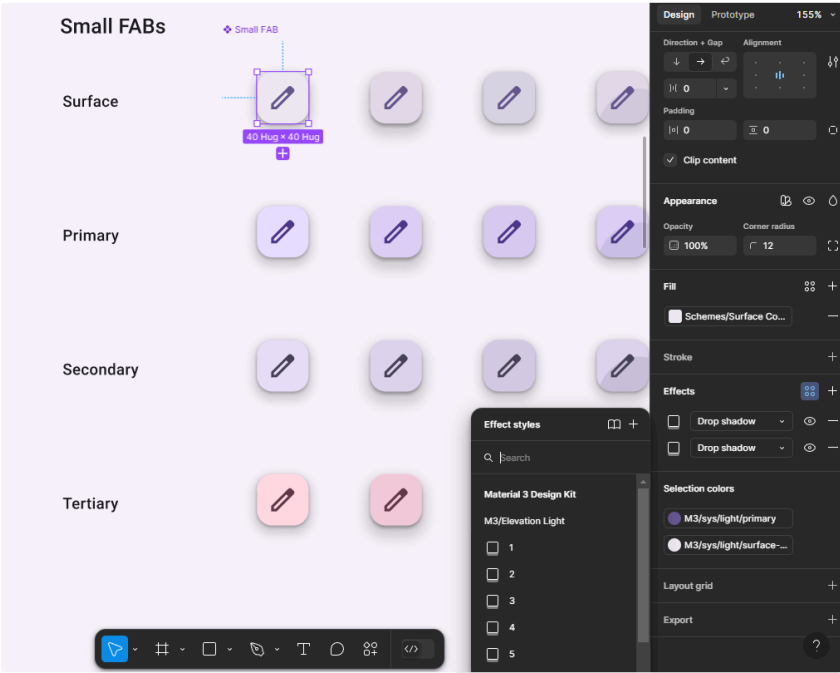
Icons 🔗

Accessibility 🔗

Icons with a label text 🔗

Label text provides short, meaningful descriptions
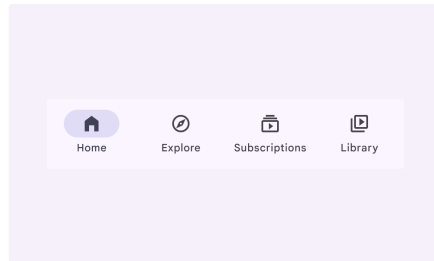
Small icons 🔗

Material Symbols can scale up or down in size without a loss of fidelity. **Simple symbols, like stars for ratings**, can be used on their own at any size, as long as they remain identifiable.

Other symbols should have an accompanying text label below 20dp to ensure their meaning is clear and to maintain accessibility. These symbols include:

- Complex icons, which are highly detailed or have multiple parts
- Icons with a key action, which are essential to using the product

Target size 🔗

Adequate space should surround icons to allow legibility and interaction.

Symbols of 24dp should have a target size of 48dp by default.

1 Measurements

2 Placement

1 Measurements

2 Placement
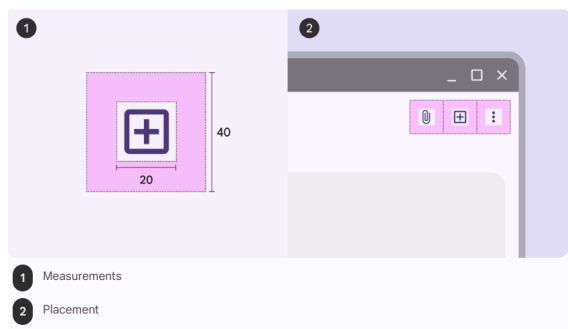
A 20dp size symbol can use a target size of 40dp.