

[illegible]

## Five Hypothetical Companies Side-by-Side Bars

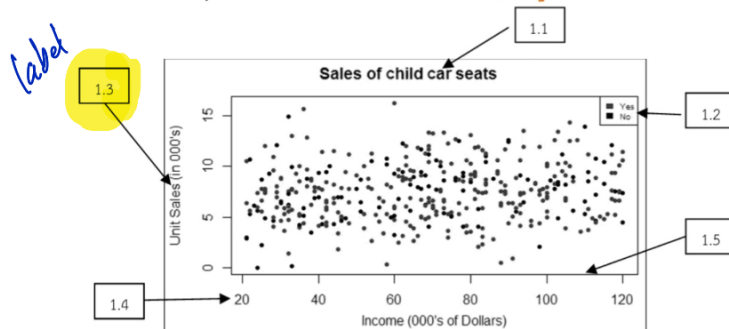
A bar chart showing the market share of five companies (A, B, C, D, E) across three years (2015, 2016, 2017). The y-axis represents the market share percentage, ranging from 0% to 20% in increments of 5%. The x-axis lists the companies. The bars are color-coded: A (orange), B (light blue), C (green), D (dark blue), and E (yellow). In 2015, the market shares are approximately: A (17%), B (18%), C (20%), D (22%), and E (24%). In 2016, the market shares are approximately: A (20%), B (20%), C (19%), D (22%), and E (20%). In 2017, the market shares are approximately: A (24%), B (22%), C (20%), D (18%), and E (17%).

Year	Company	Market Share (%)
2015	A	17
	B	18
	C	20
	D	22
	E	24
2016	A	20
	B	20
	C	19
	D	22
	E	20
2017	A	24
	B	22
	C	20
	D	18
	E	17

The 8th German Bundestag | Visualized Data

	Pie chart	Stacked bars	Side-by-side bars
Clearly visualizes the data as proportions of a whole	✓	✓	✗
Allows easy visual comparison of the relative proportions	✗	✗	✓
Visually emphasizes simple fractions, such as 1/2, 1/3, 1/4	✓	✗	✗
Looks visually appealing even for very small datasets	✓	✗	✓
Works well when the whole is broken into many pieces	✗	✗	✓
Works well for the visualization of many sets of proportions or time series of proportions	✗	✓	✗

1. จากรูปกราฟ ให้นักศึกษาระบุว่าองค์ประกอบที่ไม่เกี่ยวข้องกับข้อมูล (Non-Data Ink) คืออะไร



5

Acronym	Name	Type	Application
pdf	Portable Document Format	vector	general purpose
eps	Encapsulated PostScript	vector	general purpose, outdated; use pdf
svg	Scalable Vector Graphics	vector	online use
png	Portable Network Graphics	bitmap	optimized for line drawings
jpeg	Joint Photographic Experts Group	bitmap	optimized for photographic images
tiff	Tagged Image File Format	bitmap	print production, accurate color reproduction
raw	Raw Image File	bitmap	digital photography, needs post-processing
gif	Graphics Interchange Format	bitmap	outdated for static figures, Ok for animations