LESSON MAKER PRO

Front View Plans

Turn solid measurements into scaled elevations.

HIGH SCHOOL · MM.D3D.A.10

MM.D3D.A.10 "Construct a two-dimensional visual representation of a three-dimensional object or structure. a. Determine the level of precision and the appropriate tools for taking the measurements in constructing a two-dimensional visual representation..."

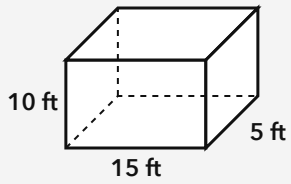
NAME _____ DATE _____

FROM SOLID TO FLAT

A front elevation shows a rectangular prism's length and height, but not its depth. Find any missing height by subtraction, then divide each real measurement by the scale factor to get its drawing measurement.

WORKED EXAMPLE

Sketch the front elevation of the crate shown at 1 cm on paper = 5 ft in life. Label its width and height.



1. Front width: 15 / 5 = 3 cm.
2. Front height: 10 / 5 = 2 cm.
3. Sketch a rectangle 3 cm wide and 2 cm high.

Answer: A rectangle labeled 3 cm wide and 2 cm high.

PRACTICE 4 problems

1 A rectangular prism has length 18 ft and height 12 ft. At 1 cm = 6 ft, what is its front elevation's width?

ANSWER _____

2 A rectangular prism has length 32 ft and height 16 ft. At 1 cm = 8 ft, what is its front elevation's height?

ANSWER _____

3 A rectangular prism has length 36 ft and height 27 ft. At 1 cm = 9 ft, find its front elevation's width and height.

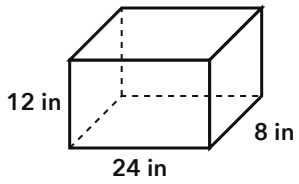
ANSWER _____

4 A concert banner's top is 25 ft above the floor, and its bottom is 17 ft above the floor. How tall is the banner in an elevation?

ANSWER _____

APPLY IT Show your work

1 A gaming desk organizer has the dimensions shown. At 1 in on paper = 6 in in life, what are its front elevation's width and height?



ANSWER _____

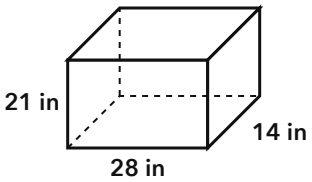
2 On a concert set, a screen reaches 34 ft above the floor. Its platform is 22 ft above the floor. At 1 in on paper = 4 ft in life, how tall is the screen section above the platform on an elevation?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A streaming setup has the case shown. A light bar will sit 7 in below its top. At 1 cm on paper = 7 in in life, sketch the front elevation with a line for the bar. Label the drawing's width, height, and bar height above the base. Explain why the depth is not drawn.



WORK SPACE AND ANSWER

ANSWER KEY

Front View Plans

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A rectangular prism has length 18 ft and height 12 ft. At 1 cm = 6 ft, what is its front elevation's width?	**3 cm**
2	A rectangular prism has length 32 ft and height 16 ft. At 1 cm = 8 ft, what is its front elevation's height?	**2 cm**
3	A rectangular prism has length 36 ft and height 27 ft. At 1 cm = 9 ft, find its front elevation's width and height.	**Width: 4 cm; height: 3 cm.**
4	A concert banner's top is 25 ft above the floor, and its bottom is 17 ft above the floor. How tall is the banner in an elevation?	**8 ft**

PART 2 · APPLY IT

1. **Width: 4 in; height: 2 in.** The front shows the 24 in length and 12 in height. Divide each by 6.
2. **3 in** The section is 34 - 22 = 12 ft tall. On the drawing, 12 / 4 = 3 in.

CHALLENGE

Sketch a rectangle 4 cm wide and 3 cm high, with a horizontal bar 2 cm above its base. The 14 in depth is not drawn because a front elevation shows only width and height.

Accept freehand sketches with correct labels and proportions. The challenge bar is 21 - 7 = 14 in above the base, or 2 cm on the drawing.