



Virtual Learning

The Architect's Scale

April 14, 2020



Civil Engineering and Architecture
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Lesson: April 14, 2020

Objective/Learning Target:

Students will learn to accurately use an architect's scale



Bell Ringer:

Using what you learned from the previous lesson, between $\frac{1}{8}'' = 1'-0''$ and $1'' = 1'-0''$, which scale would be more appropriate to use when designing a doghouse? What about an apartment building? Justify your answers.



Let's get started:

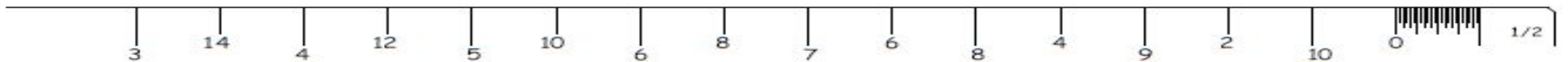
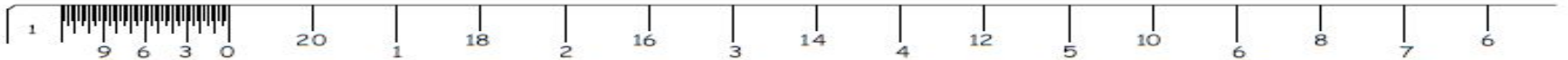
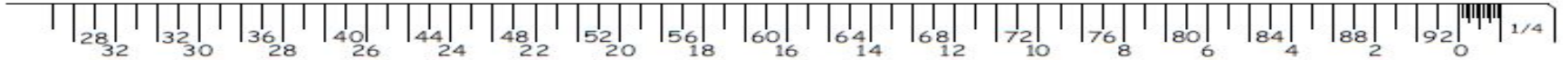
An architect's scale is a tool that allows designers to create large scale projects such as buildings and bridges at a reduced size. A typical scale is triangular in shape and contain as many as 12 different scales on it.

Review this video on how to read the architect's scale from Bob:

<https://www.youtube.com/watch?v=PrbjWgyZIFc>

Practice:

Print this page at 100% scale. Use your printed scales to measure the lines using the proper scale (if you do not have an architect's scale handy).





Practice:

Record the length in feet and inches using the $\frac{1}{4}'' = 1'-0''$ scale:

1. _____

2. _____

3. _____

4. _____

5. _____



Practice:

Record the length in feet and inches using the $\frac{1}{2}'' = 1'-0''$ scale.

1. _____

2. _____

3. _____

4. _____

5. _____



Practice:

Record the length in feet and inches using the $\frac{1}{8}$ " = 1'-0" scale.

1. _____

2. _____

3. _____

4. _____

5. _____



Practice:

Record the length in feet and inches using the 1" = 1'-0" scale.

1. _____

2. _____

3. _____

4. _____

5. _____

Check your work:

Answers** for measurements:

$\frac{1}{4}$ " Scale

1. 18'-4"
2. 11'-3"
3. 14'-6"
4. 12'-8"
5. 20'-8"

$\frac{1}{8}$ " Scale

1. 36'-8"
2. 22'-6"
3. 29'-2"
4. 25'-6"
5. 41'-4"

$\frac{1}{2}$ " Scale

1. 9'-1 $\frac{1}{2}$ "
2. 5'-6 $\frac{1}{2}$ "
3. 7'-3"
4. 6'-4 $\frac{1}{2}$ "
5. 10'-4"

1" Scale

1. 4'-7"
2. 2'-9 $\frac{3}{4}$ "
3. 6'-7 $\frac{3}{4}$ "
4. 3'-2"
5. 5'-2"

Common Mistakes:

- Make sure you are reading from the correct end. Depending on the scale you are using you could either read from right to left or left to right.
- Make sure you are using the correct numbers on the scale.
- The larger the scale the more precise your measurements need to be (i.e. $\frac{1}{8}$ " scale measures to the nearest 2" and 1" scale measures to the nearest $\frac{1}{4}$ ").

**Due to the nature of printer discrepancies and interpretations of the printed scales, answers, answers are approximate.



Additional Resources:

How to read the architect's scale:

<https://akloc.files.wordpress.com/2013/09/architectural-scale.pdf>

https://www.youtube.com/watch?v=aytX_QAMzbnk

<https://www.youtube.com/watch?v=fQY7fUmtjPw>