

Measure It Like an Appraiser: teacher script

Real estate and appraisal students measure a house at full size the way ANSI Z765-2021 requires, then decide what counts as above-grade finished area and what does not.

Prep: Tape or print the main-level outline at full size; mark it as exterior finished surface. Tape an inner line 6 in inside to stand for interior wall faces. Print the scenario sheet and one measuring sheet per team.

Min	Step and what to do	Ask	Listen for
0-5	Hook Show two listing numbers that differ by about 70 sq ft. "Same house. Who is right?"	What could make them differ?	Inside vs outside measuring, what counts, rounding.
5-15	Measure Teams measure the main outline and the bump-out to the nearest inch on the exterior line, then the same walls on the interior line.	How much area does measuring inside lose?	About 70 sq ft on the main rectangle.
15-30	Apply the rules Teams work the scenario: second floor with a 10 ft x 12 ft two-story foyer opening; a 14 ft x 20 ft bonus room with a sloped ceiling; a finished basement.	Does the bonus room count, and how much of it?	Yes: 57% has 7 ft or more; count the 260 sq ft with 5 ft or more.
30-42	Compute and report Teams total GLA and round once, at the end, to the whole square foot. Basement reported on its own line.	What is the reported GLA?	2,702 sq ft.
42-50	Exit ticket Individual exit ticket.		

Common misconceptions

- **Learners may think:** Finished means counted. **Address it:** Finished below-grade space and areas that fail the height rules are reported separately, not in GLA.
- **Learners may think:** Round each room as you go. **Address it:** Rounding each piece adds error; carry full values and round the total.

Supports

- Give a feet-and-inches to decimal-feet card.
- Multilingual learners: label exterior finished surface, below grade, opening and sloped ceiling on the floor.
- Extension: compare the result with a public listing for the same plan and explain the difference.

References

- **ANSI Z765-2021:** Square Footage, Method for Calculating (single-family detached and attached homes); check the current standard
- **Perkins V (CTE):** postsecondary and secondary CTE program context

Scenario sheet

Detached two-story house, measured to exterior finished surfaces. Main level: 30 ft 4 in x 40 ft 2 in, plus a rear bump-out 10 ft 0 in x 12 ft 6 in. Second level: same 30 ft 4 in x 40 ft 2 in footprint, with a two-story foyer opening 10 ft x 12 ft; the stair descends from the second level. Bonus room over the garage, finished, 14 ft x 20 ft, sloped ceiling: an 8-ft-wide center strip has 7 ft or more; 2 1/2 ft each side has 5 ft to under 7 ft; 1/2 ft each side is under 5 ft. Finished basement 30 ft 4 in x 40 ft 2 in. Attached garage, unfinished.

LEARNER SHEET • MEASURE IT LIKE AN APPRAISER

Name _____ Date _____

Area	Work	Sq ft
Main level		
Bump-out		
Second level less opening		
Bonus room: share at 7 ft+, counted area		
GLA (reported)		
Below-grade finished		
Main level measured inside 6-in walls		

Exit ticket

1. A stair runs from the second floor to the first. Which floor counts it?

2. A sloped room: 45% of it has 7 ft or more of ceiling height. Does it count in GLA?

3. Measured inside instead of outside, is GLA too high or too low?

Answer key

Area	Answer
Main level	$30.333 \times 40.167 = 1218.39$ sq ft
Bump-out	$10 \times 12.5 = 125.00$ sq ft
Second level	$1218.39 - 120$ (opening) = 1098.39 sq ft (stair counted here)
Bonus room	$160 / 280 = 57\%$ at 7 ft+, so it counts; include area 5 ft+: 260 sq ft
GLA	2701.78, reported as 2,702 sq ft
Below grade	1218 sq ft finished, reported separately
Inside measuring	1148.89 sq ft: 70 sq ft less on the main rectangle alone

Exit ticket

1. A stair runs from the second floor to the first. Which floor counts it?
Answer: The second floor (the level it descends from).
2. A sloped room: 45% of it has 7 ft or more of ceiling height. Does it count in GLA?
Answer: No: at least 50% must have 7 ft or more.
3. Measured inside instead of outside, is GLA too high or too low?
Answer: Too low: wall thickness is left out.

Scoring: 1 point each, plus 1 for the correct reported GLA. 3 or more = secure.

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