

Homework Quiz #3 – Lessons 7, 8 and 9

Directions: You may use the following materials during this quiz: Homework, Notes, Tape Measures, Calculator, Formula Sheet. No copies of other people's work. **You MUST show your work and include units to get full credit!!!!**

Each problem is worth 11 points

From the Lesson 7 Practice Set:

Be sure to show your calculations (you can just write down the math you did with your calculator) and include units in your answer.

From Book page #60

1. Do all of problem #13: In constructing a building, 2% of the total cost is allowed for excavation. Find the cost of the house if the excavation costs \$825.

From Book page #62

2. Do all of problem #25: How much should a contractor bid for a job if costs total \$2,300 and a profit of 12% (markup) is desired? Note: Amount of bid = Cost + Profit

Lesson 7 covered calculating profit using 'margin.' We did not finish it in class, but you were provided the definition and formula and a problem in the homework asked you to do a margin calculation.

Definitions:

- **Markup:** The profit as a % OF the cost
 - ① Profit = markup % * cost
 - ② Charge to customer = cost + Profit
- **Margin:** The profit as a % OF the amount charged to the customer.
 - ① Charge to customer = $\frac{\text{cost}}{(100\% - \text{margin}\%)}$
 - ② Profit = Charge to Customer -

BONUS (4 points): Do problem #25 with a 12% margin (instead of markup) and answer the following:

- a. What is the Amount of bid?
- b. What is the profit in \$\$?

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From the Lesson 7 Extra Practice Set:

Be sure to show your calculations

3. Do all of problem #3 from the practice set: 7 is 28% of what number?

4. Do all of problem #5 from the practice set: 70 is what percent of 56?

From the Lesson 8 Practice Set:

Be sure to show your calculations (write down the math you did with or without your calculator) and include units in your answer. NOTE: For full credit, IF you used special buttons on your calculator, you MUST show what buttons you used in your calculations.

5. Do all of problem #1 from the practice set: You have poured a 30' length of sidewalk with an 11" fall. What is the % slope? Round your answer to 2 decimal places (nearest hundredth)

6. Do only part a. of problem #2 from the practice set: The pitch per foot of a driveway is $\frac{3}{4}$ ".
 - a. What is the fall for 30' of driveway?

From the Lesson 9 PART 1 Practice Set:

Be sure to show your calculations (write down the formula you used and the math you did with your calculator) and include units in your answers.

7. Do all of problem #3 from the practice set: The height from the bottom to the top of a wall is 120". You will be installing wood siding that is 8" wide. If each piece of siding must overlap the previous piece by no less 1" and no more than 2"
- What is the reveal of each course of siding?

 - How many courses of siding will there be on the finished wall?

From the Lesson 9 PART 2 Practice Set:

Be sure to show your calculations (write down the formula you used and the math you did with your calculator) and include units in your answer.

Note: When building hand rail, Wisconsin building code requires that the spaces between balusters be $\leq 4"$. Furthermore, it is best practice to make all of the spaces between balusters equal.

8. Do all of problem #2 from the practice set: The distance between posts for a hand rail is 6'-4" and you are using 1" wide spindles.
- How many balusters will you need?

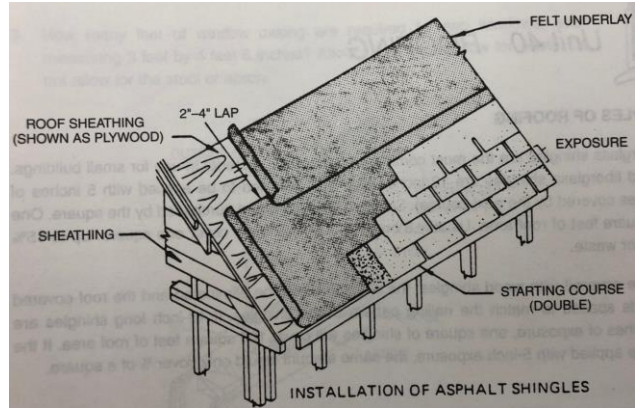
 - What is the on center spacing of the wide balusters?

 - What is the spacing between each baluster?

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From Book page #158

Note: a 'square' for roofing = 100 square feet.
Review page 157 for a picture of a shingle installation.



9. Do all of problem #3 from the practice set (problem #2 on page 158): How many bundles of wood shingles applied with 6 inches exposure are required for one side of a gable roof measuring 16 feet by 32 feet? There are 4 bundles per square. Allow 8% for waste.
Be sure to show all of your calculations (write down the math you did with your calculator) and include units in your answer.

BONUS (2 points) : How many courses of shingles will you need? *Be sure to show all of your calculations*