



Technology is our middle name!

NAME : _____ Date: _____



Schuylkill Technology Centers
North Campus
- Since 1968 -

**CARPENTRY
PROGRAM**
(Cip Code: 46.0201)

101 Technology Drive

1200	Learning Guide #12: ESTIMATION	Level 3
1201	Demonstrate the knowledge of how to estimate the bricks and blocks needed to complete a given task.	
1202	Correctly estimate the amount of concrete needed to complete a given task.	
1203	Correctly estimate the cost and amount of materials to finish an exterior wall.	
1204	Correctly estimate the cost and amount of materials to finish an interior wall.	
1205	Correctly estimate the cost and amount of materials to construct a floor.	
1206	Correctly estimate the cost and amount of materials to construct a roof.	
1207	Correctly estimate the cost and amount of materials to install siding for a house.	

PURPOSE: To develop estimating skills using related math, and a builder's calculator to determine materials costs for a construction project, and to prepare for NOCTI testing items related to carpentry certification.

STC Carpentry Industry Certifications:	
Residential Construction Academy (RCA) Certificate	NOCTI Carpentry Certificate

NOTE: If you are having any difficulties concerning Learning Guide #12, check this box, and circle each page number, so we can assist you.



GENERAL INFORMATION

TERMINAL PERFORMANCE OBJECTIVE (TPO): Upon successful completion of the activities contained in this Learning Guide, the student will be able to estimate materials for a residential job and an interior remodel project. The assessment of the related (POS tasks) competencies will be measured by (1) completion of learning guide, (2) completion of performance assignments (contained in this L.G.), and (3) a written test.

STUDENT LEVEL: 3

STUDENT ACCOMMODATIONS: Please refer to students IEP for individual accommodations, which typically fall under the following four categories: Presentation Accommodations, Response Accommodations, Setting Accommodations, and Timing/Scheduling Accommodations.

REVISION DATE: 11/20/13

GENERAL ACCOMODATIONS:

REFERENCES: (1) Residential Construction Academy (RCA) Textbook (Floyd Vogt)
(2) Residential Estimating DVD
(3) Carpentry shop reference library
(4) IRC codebook
(5) NOCTI Study Guide

SAFETY: Safety Note #12 – page 3.

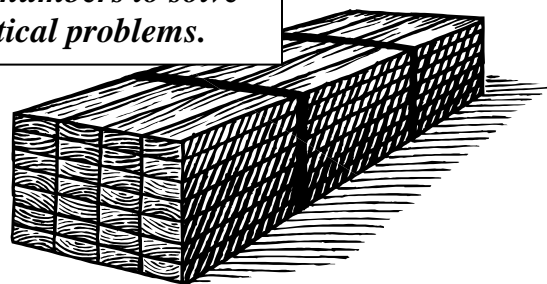
EQUIPMENT & SUPPLIES: (1) Builder's calculator (& manual)
(2) Estimating signs (with formulas)
(3) Computer estimating programs
(4) Estimating Textbooks
(5) 25' measuring tape

RELATED STANDARDS:

Area:	Codes:	Standards Description:	RCA Standard
Tech Writing	CC.3.6.11-12.I	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	Com.
Tech Writing	CC.3.6.11-12.E.	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	Com.
Tech Writing	CC.3.6.11-12.F.	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	Com.
Tech Writing	CC.3.6.11-12.C.	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	Com.
ELA	CC.1.3.11-12F	Evaluate how words and phrases shape meaning and tone in texts.	Com.
ELA	CC.1.4.11-12.L	Demonstrate a grade appropriate command of standard English grammar, usage, capitalization, punctuation and spelling.	Com.
MATH	CC.2.1HS.F2	Apply properties of rational and irrational numbers to solve real world or mathematical problems.	Math
MATH	CC.2.1.HS.F.5	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.	Math
MATH	CC.2.3.HS.A.14	Apply geometric concepts to model and solve real world problems.	Math

Note that a cube of framing lumber designates the PA Common Core Standards!

Math CC.2.1.HS.F.2: Apply properties of rational and irrational numbers to solve real world or mathematical problems.





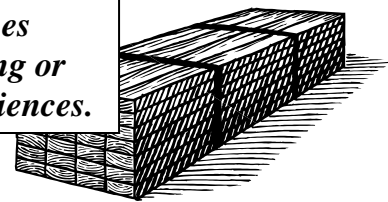
STUDENT DIRECTIONS



1. Read **ALL** instructions before you begin an assignment.
2. **If you need help**, ask the Instructor or Teacher Aide.
3. Complete **all** Learning Guide (LG #12) assignments – **must be readable**.
4. Work on Learning Guides until **finished or dismissed**.
5. These assignments account for the **KNOWLEDGE GRADE – 30%**.

#	~ ASSIGNMENTS & PROCEDURES ~	Pg	Gd
1	Fill in information <u>each day</u> on “ TIME MANAGEMENT LOG. ”	5	
2	Complete “ PRETEST ” concerning estimation.	6	
3	Discuss and complete “ SAFETY NOTE #12. ”	7	
4	Define 14 “ VOCABULARY ” terms related to estimating.	8	
5	Watch “ ESTIMATING VIDEO ” in class and answer five related questions.	10	
6	Write neatly when working on “ ORDER BUILDING MATERIALS. ”	11	x
7	Use “ BUILDER’S CALCULATOR ” along with manual for estimating jobs.	14	x
8	Use builder’s calculator for “ ESTIMATE A RESIDENTIAL JOB. ”	16	x
9	Use builder’s calculator for “ ESTIMATE A COMMERCIAL JOB. ”	22	x
10	“ ESTIMATE MASONRY MATERIALS ” with formulas in theory room.	25	x
11	Call for “ MATERIALS PRICING ” – a competitive assignment.	26	
12	Complete the “ ABOUT PERCENTAGES ” assignment – 10 job situations.	27	x
13	Prepare a “ JOB PROPSAL ” – a research assignment.	29	x
13	Complete “ POST-TEST ” concerning estimation.	6	
14	Review STC “ GRADING RUBRIC ”	31	
15	Review STC “ ASESSMENT ”	32	

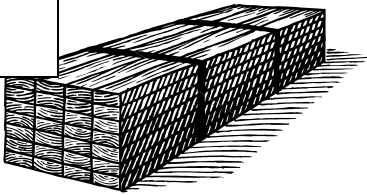
Tech Writing - CC.3.6.11-12.I: Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.



TIME MANAGEMENT LOG

Date:	Learning Guide Assignments & Progress:

ELA – CC.1.3.11-12F: Evaluate how words and phrases shape meaning and tone in texts.

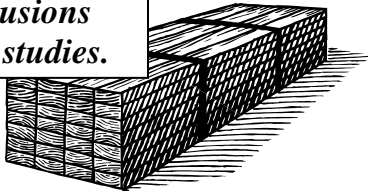


ESTIMATION PRE-TEST

INSTRUCTIONS: Complete the **Pre-Test** to the best of your ability.



#	QUESTIONS:	Pre-Test
1	Roofing and siding materials are estimated by the _____.	
2	Concrete is estimated and sold by the cubic _____.	
3	Molding and trim is sold by the _____ foot.	
4	The formula for calculating the Area of a triangle is $\frac{1}{2}$ Base x _____.	
5	A sheet of $\frac{1}{2}$ " x 4' x 8' drywall contains _____ sq. ft.	
6	One square foot requires _____ standard bricks.	
7	16" (oc) has a decimal equivalent of _____ .	
8	16" (oc) has a fractional equivalent of _____.	
9	Fiberglass insulation would be estimated by the _____ .	
10	Board Feet = <u>No. of Pieces x Thickness x Width x Length</u> <div style="text-align: center; border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">?</div>	

Math – CC.2.4.HS.B5: Make inferences and justify conclusions based on sample surveys, experiments, and observational studies.



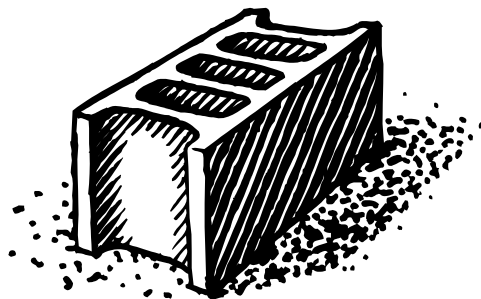
INFORMATIONAL OUTLINE

(MAX Teaching Power Point Presentation)

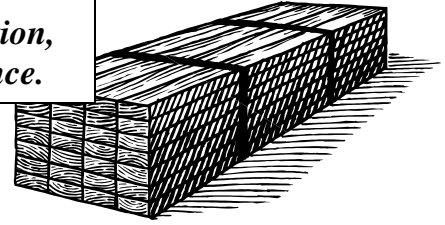
	<p style="text-align: center;"><u>INSTRUCTIONS:</u></p> <p>This is an introduction to estimating materials for residential building. We will view a power point presentation outlining the information which is covered throughout POS # 1200 ESTIMATION. Complete all assignments as you move through the presentation as directed by the Instructor. <i>(NOTE: This is a MAX Teaching anticipation guided assignment)</i></p>	
<p>JOB #</p>	<p>You will be given verbal instructions how to complete each job.</p>	<p>Complete?</p>
#1		
#2		
#3		
#4		
#5		
#6		
#7		
#8		

#9		
#10		
#11		
#12		
#13		
#14		
#15		
#16		
#17		
#18		
#19		
#20		

#21		
#22		
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#28		



Tech Writing - CC.3.6.11-12.C: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.



SAFETY NOTE #12

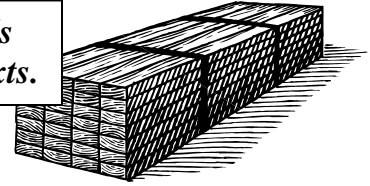
Instructions: In your own words, answer the question in the caption below:

- ❖ Keep building materials in straight - neat piles.
- ❖ This makes it easier for inventory, and prevents damage!

Why is this important to safety on a job site?



ELA - CC.1.3.11-12.F: Evaluate how words and phrases shape meaning and tone in texts.

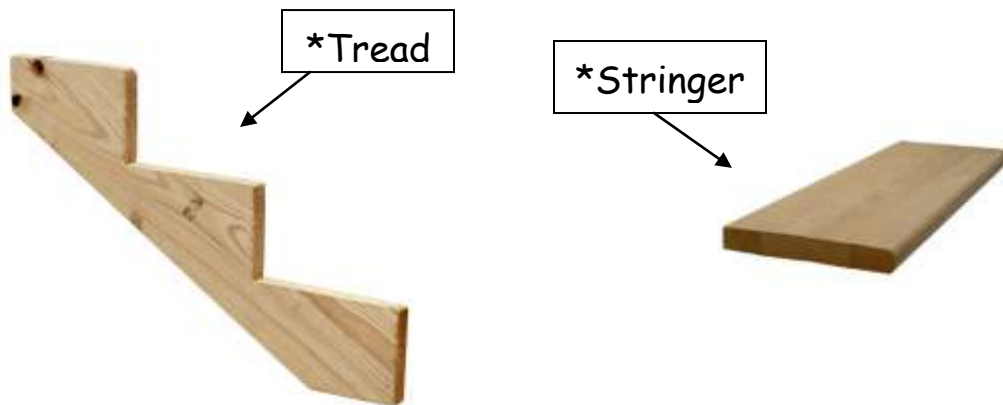


VOCABULARY

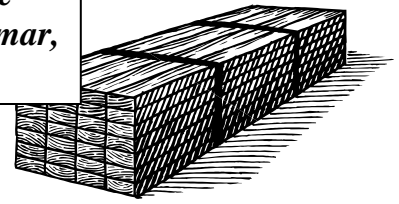
INSTRUCTIONS: Refer to the **estimating signs** (#1 - #14) on the theory room **north** wall and **define / write** each formula related to estimating building materials.

1	Lineal Feet	
2	Wall Framing	
3	Roof Framing	
4	Area	
5	Sheathing	
6	Gable (wall) Sheathing	
7	Roof Sheathing	

8	Roof Shingles	
9	Siding	
10	Drywall	
11	Block	
12	Brick	
13	Concrete	
14	Board Feet	



ELA - CC.1.4.11-12.L: Demonstrate a grade appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation and spelling.



ESTIMATING VIDEO

INSTRUCTIONS: Complete 5 estimating questions (below) taken from the “Estimating video”.



You need to pay attention!

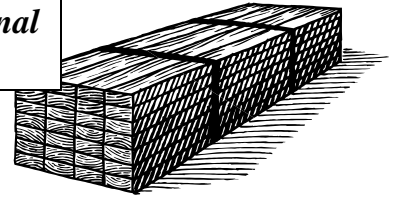
1. What is the floor joist material size? _____

2. What is the formula for calculating floor joists spaced at 16” on center?

How many 4’ x 8’ sheets of material are needed for the subfloor job? _____

For studs spaced at 16” on center, multiply by _____.

How long are (8 ft.) precut wall studs? _____



ORDER BUILDING MATERIALS

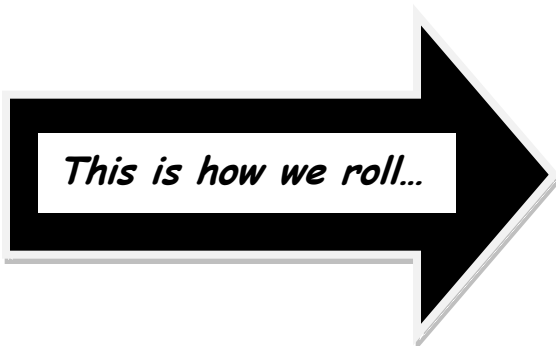
- INSTRUCTIONS:** (1) Review the 5 notes below concerning building materials.
(2) On pages 12 & 13, complete the information needed for twenty carpentry jobs listed in the table.
(3) Fill in suppliers in the open (white) columns.
(4) **Refer to the RCA Carpentry textbook for required materials.**

FIVE THINGS TO CONSIDER WHEN ORDERING MATERIALS:

1. **SELECT MATERIALS:** If you are building a deck, what are your choices?
(a) Redwood (b) Pressure Treated Lumber (c) Cedar (d) Trex/Plastic Lumber
2. **KNOWLEDGE OF MATERIALS:** A Carpenter needs to know that a stair stringer will require 2" x 12" SPF #2 in order to meet (IRC) code and be "safe".
3. **ESTIMATING MATERIALS:** It is the Carpenter's responsibility to correctly estimate the number of $\frac{5}{8}$ " CDX plywood for a roof job (AREA = length X width).
4. **INSPECT , INVENTORY , and STORE MATERIALS:** Upon receiving an order of building materials (siding, windows, etc.), it is the responsibility of the Carpenter to inspect the condition of the delivery. The Carpenter must count the material items and "match" them to an invoice.
Handling and storing building materials is also a major concern; some "FRAGILE" materials may need covered like countertops, while other delicate materials such as molding must be placed where it won't be damaged.
5. **BE SPECIFIC when ordering building materials:**

If you need to order sixty - 2" x 4"s, it should look like this on paper:

60 - 2" x 4" x 16' #2 SPF



- (1) *Material quantity (first)*
- (2) *Material thickness (second)*
- (3) *Material width (third)*
- (4) *Material length (fourth)*
- (5) *Material grade (fifth)*
- (6) *Materials species (sixth)*

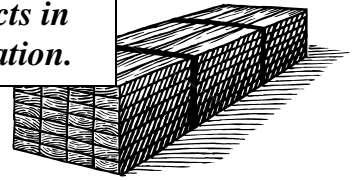
ORDER BUILDING MATERIALS

	JOB:	MATERIAL: (choose any quantity)	List SUPPLIER:
1	Exterior stair stringer		
2	Exterior wall plates (for a garage)		
3	Interior wall plates (for a home)		
4	Interior wall finish (covering)		
5	Siding		
6	Sub-flooring		
7	Ceiling insulation		
8	Floor framing (joists)		
9	8' Wall framing (pre-cut studs)		
10	Sidewalk		

11	Roof edge		
12	Foundation (concrete block)		
13	Wall sheathing		
14	Interior paint (for sheetrock)		
15	Downspouts		
16	Roof sheathing		
17	Casing (window & door molding)		
18	Interior doors		
19	Foundation plates (mudsills)		
20	Brick (wall veneer)		



Tech. Writing - CC.3.6.11-12.E.: Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.



BUILDER'S CALCULATOR

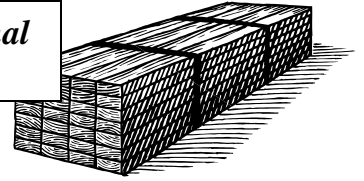
- INSTRUCTIONS:** (1) Using the Builder's calculators (located in the theory room), and the Construction Master Pro workbook and Study Guide, complete the following 10 related estimating job site problems below:
- (2) **PRACTICE** each related example in the Workbook- found on grey shelves, before you calculate the estimating jobs below:
- (3) Provide a page number where you located each formula in the Construction Master Pro Workbook.

#	Estimating Jobs:	Reference Page No.	Answers:
1	A basement floor job (slab) requiring 2,500 PSI concrete measures 52' - 4" long by 24' - 6" wide. The thickness is specified at 4". What is the total cubic yards of concrete needed if you add 10% waste allowance?		
2	You need to calculate the amount of 3,000 PSI concrete needed for a wall measuring 46' - 8" long, 8' - 8" long, and 12" thick? Include 10% waste.		
3	You need to calculate the amount of 8" x 8" x 16" concrete block needed for a wall measuring 46' - 8" long by 8' - 8" high ?		
4	Find the number of studs (spaced 16" O.C.) for a 60' wall?		
5	Find the number of studs (spaced 16" O.C.) for a 24' x 32' garage (remember there are 4 corners).		

6	Find the number of studs (spaced 16" O.C.) for a 24' x 32' garage with three windows, one door, and two garage doors?		
7	Find the number of 16' plates for a 24' x 32' garage?		
8	You need to calculate the amount of 3,000 PSI concrete needed for a 24' x 32' garage with a 4 1/2" thick floor. Include 10% waste.		
9	Calculate the UNIT rise of a stair from a deck to a concrete patio if the TOTAL rise is 7' - 8" (Remember the IRC code specifies that a maximum unit rise is 7 3/4")?		
10	How many 4" x 8" paver bricks are required for a sidewalk measuring 4' x 50' ?		

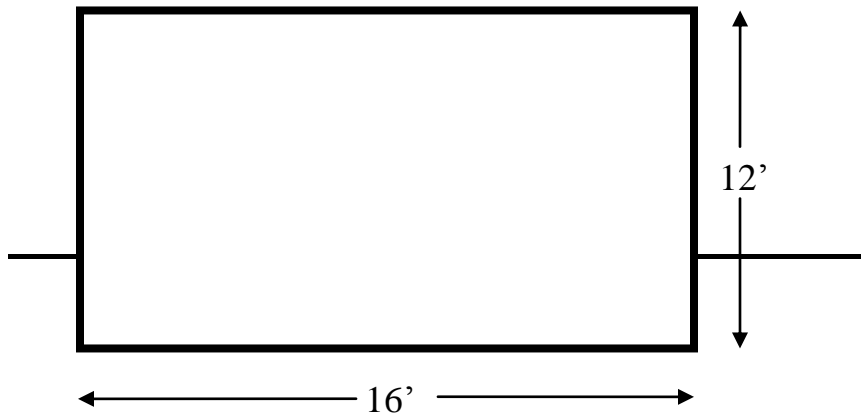


Math - CC.2.1.HS.F.2: Apply properties of rational and irrational numbers to solve real world or mathematical problems.



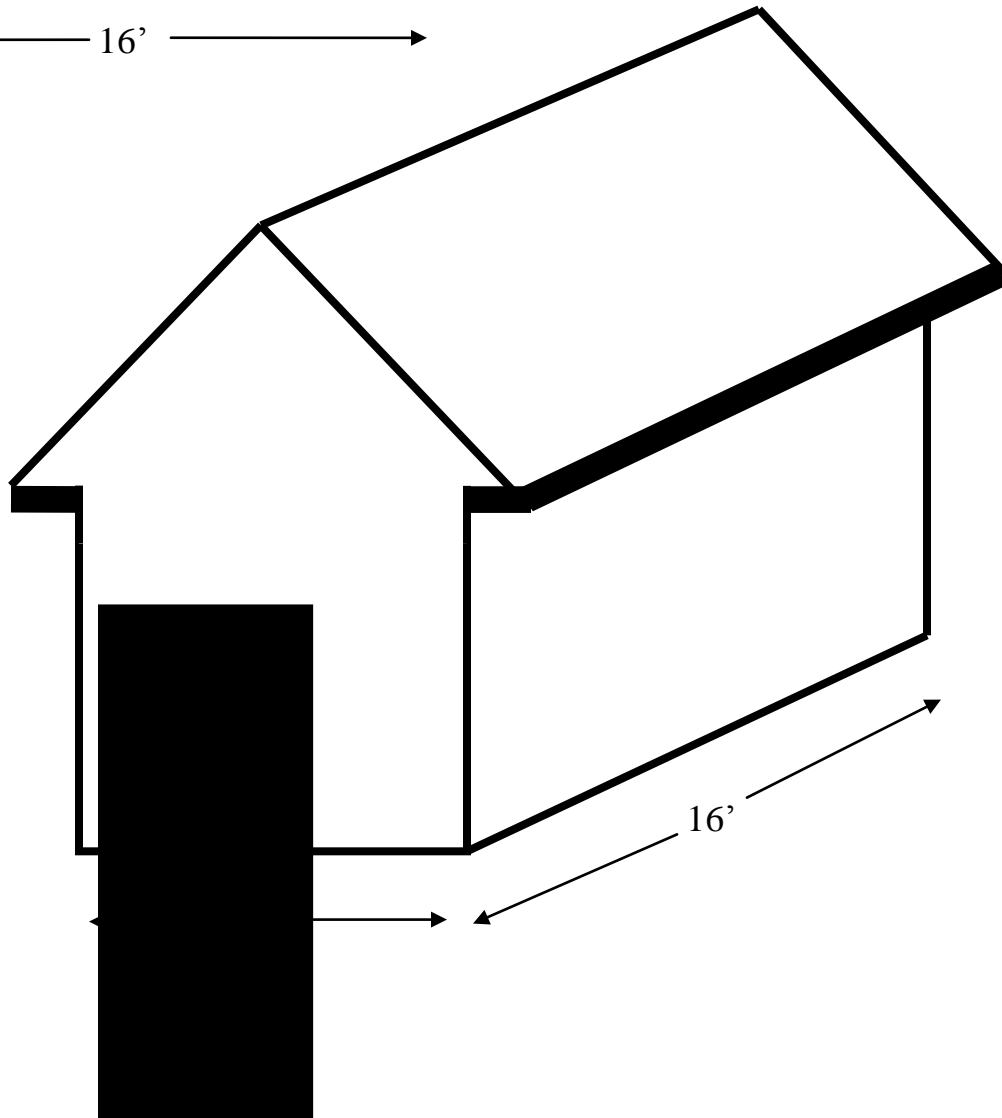
MATH COUNTS: ESTIMATE A RESIDENTIAL JOB

INSTRUCTIONS: Using the “Estimating Formulas” (theory room north) wall, and a builder’s calculator, list the building materials to complete the building below- twenty jobs.



Construction Notes:

1. Walls: 8 ft.
2. Roof overhang : 1 ft. on eaves and rake
3. Roof slope: 6/12



Job/Material:	Quantity: <i>SHOW ALL CALCULATIONS!</i>
1 Concrete block (foundation: 24" high crawl space)	
2 Anchor bolts ($\frac{1}{2}$ " x 10" @ 4ft. OC)	
3 Concrete floor (4" thick)	
4 Rim joists (2" x 10" SPF #2)	

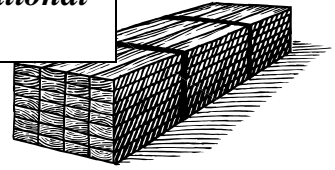
5	Floor Joists (2" x 10" SPF #2) @ 16" O.C.	
6	Subfloor (T&G) (³ / ₄ " x 4' x 8')	
7	Wall plates (2" x 4" SPF #2)	
8	Studs @ 16" O.C. (2" x 4" SPF #2) for all walls	

9	Rafters 24" O.C. - gable roof	
10	Wall sheathing (1/2" OSB)	
11	Roof sheathing (1/2" OSB)	
12	Roof edge (10' white aluminum)	

13	Roof felt paper (#15 lb.)	
14	Roofing shingles (architectural)	
15	Ridge vent (roll type)	
16	Siding (vinyl) (double 4")	

17	Coil Stock (24" x 50' white)	
18	Insulation (R13 fiberglass)	
19	Sheetrock (1/2" x 4' x 8')	
20	Casing (2 1/4" ranch style)	

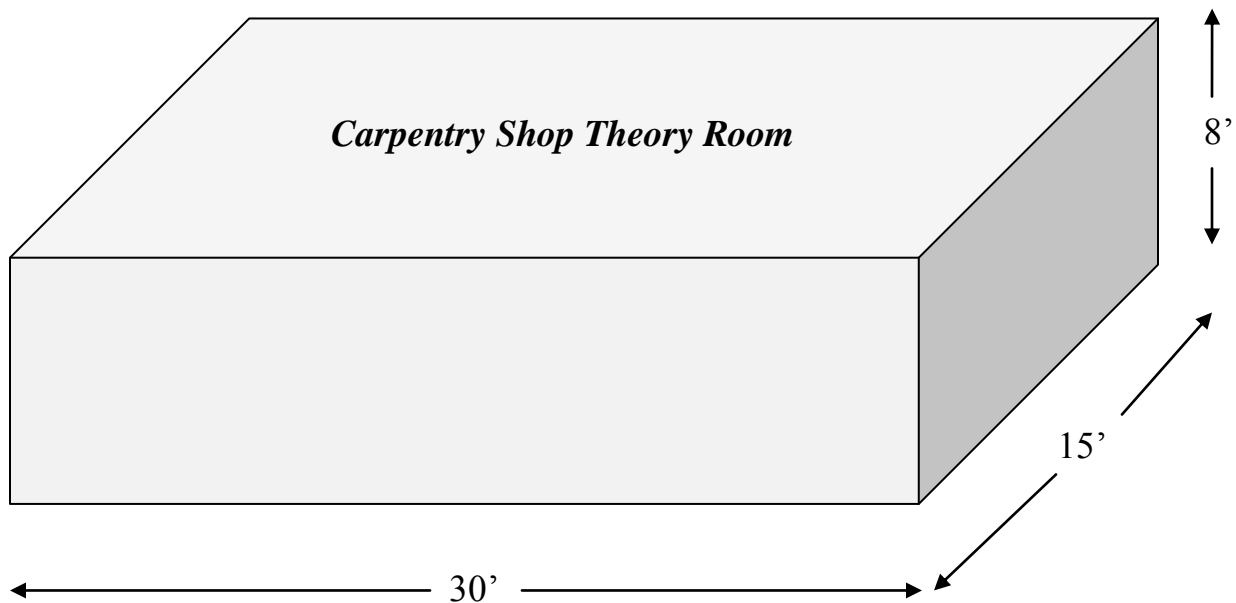
Math - CC.2.1.HS.F.2: Apply properties of rational and irrational numbers to solve real world or mathematical problems.



MATH COUNTS: ESTIMATE A COMMERCIAL JOB

INSTRUCTIONS: Using the “Estimating Formulas” (theory room north) wall, and a builder’s calculator, list the building materials needed to upgrade the **carpentry shop theory room** – ten jobs.

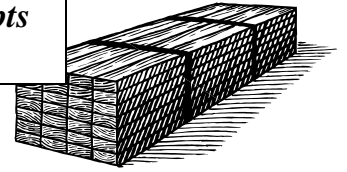
NOTICE: Make all calculations and estimates figuring two doors and **no** windows.



	Job/Material:	Quantity: <i>SHOW ALL CALCULATIONS !</i>
1	Pour a 4" concrete floor in theory room area with a 2,500 PSI mix.	
2	Frame with floor joist @ 16" O.C.	
3	Install 3/4" T & G subflooring.	
4	Plates for four perimeter walls.	
5	Build four walls with 2" x 4" x 8' SPF @ 16" O.C.	

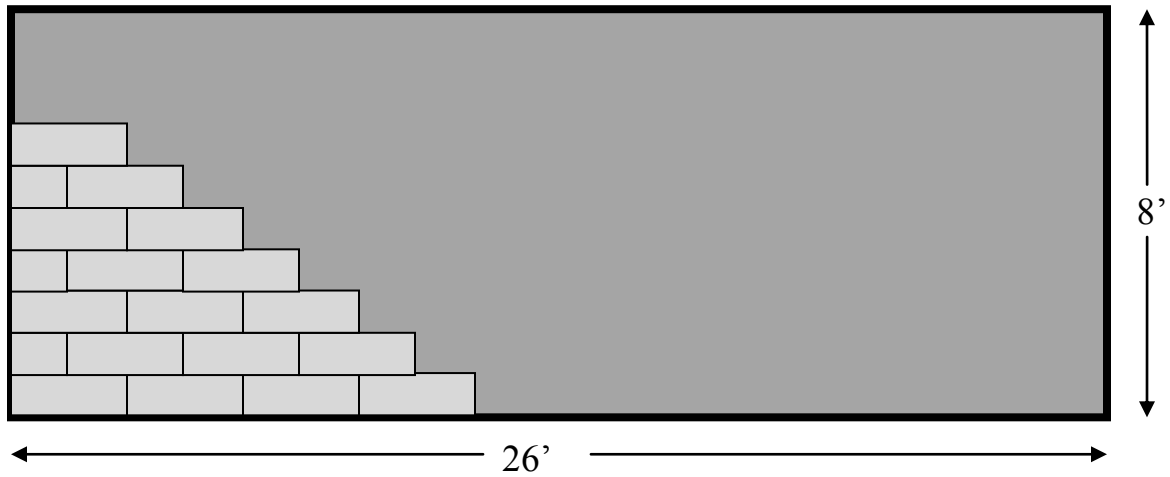
6	Install ½” sheetrock covering all interior walls.	
7	Suspended ceiling: 10 ft. wall angle	
8	Suspended ceiling: 2’ x 4’ tile	
9	Suspended ceiling: 12 ft. main runners	
10	Suspended ceiling: 4 ft. T bars	

Math - CC.2.3.HS.A.14: Apply geometric concepts to model and solve real world problems.

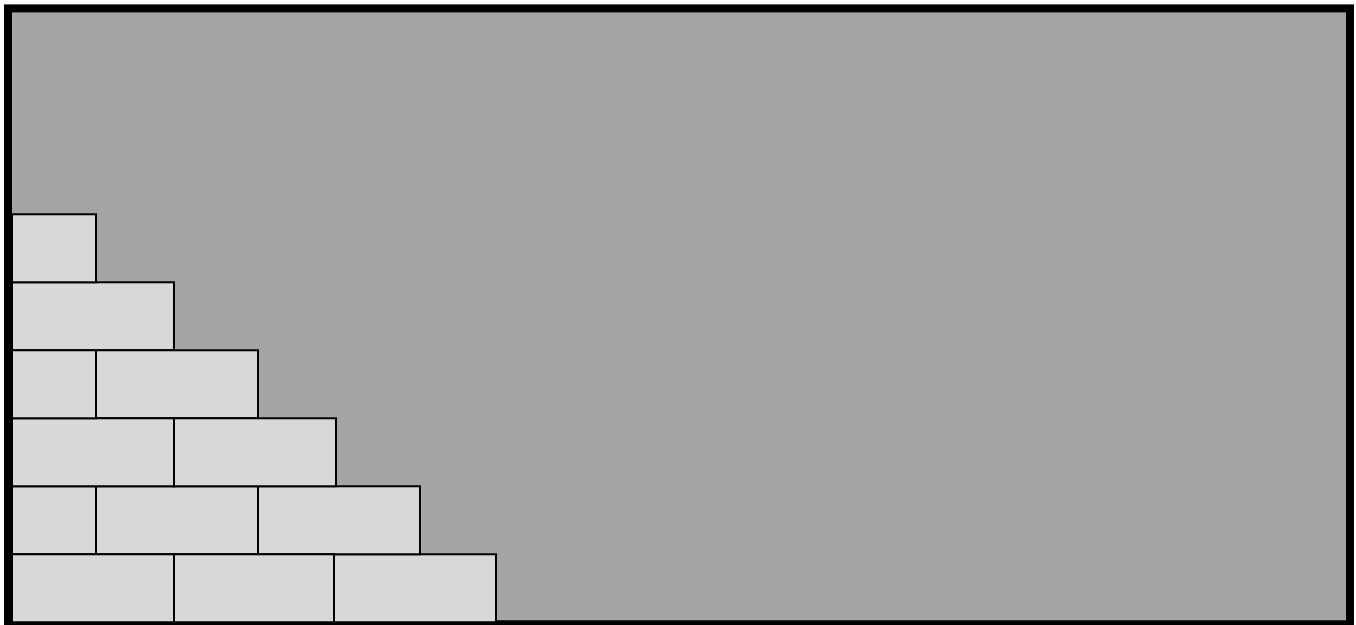


ESTIMATE MASONRY PRODUCTS

INSTRUCTIONS: Using the “Estimating Formulas” (theory room north) wall, and a builder’s calculator, estimate the masonry materials needed to complete the following two jobs.

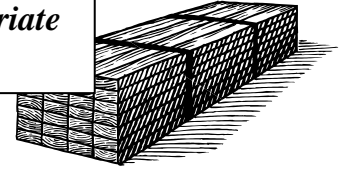


How many brick are needed to veneer (cover) this wall?



How many 8” x 8” x 16” concrete block are needed to build this wall?

Math - CC.2.1.HS.F.5: Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.



MATERIALS PRICING (Guesstimating – 2 Parts)

INSTRUCTIONS: (PART 1): *This estimating assignment involves a competition!*
 The table lists ten typical materials for residential building.
 Your job is to **estimate (or guess)** the closest price for each item.

Winner
 receives a
 carpenter's
 pencil.

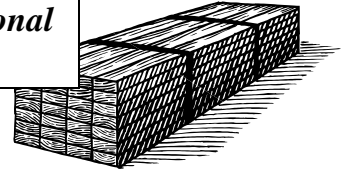


#	Building Material:	Your Estimate
1	one 2" x 4" x 8' SPF #2	\$
2	one 2" x 6" x 8' SPF #2	\$
3	one 2" x 6" x 8' SYP pressure treated	\$
4	one 2" x 12" x 16' SPF #2	\$
5	one 1/2" x 4' x 8' OSB	\$
6	one 10' aluminum roof edge	\$
7	one roll 24" x 50' aluminum coil stock	\$
8	one 2" x 3" x 10' aluminum downspout	\$
9	one 50 lb. 12d common nails	\$
10	one 1/2" x 12" anchor bolt	\$
TOTALS:		

(PART 2): Go to the Drafting room and prepare an (Excel) spreadsheet using the “**ORIOLES**” **ESTIMATING SHEET** – (on computer desktop) and enter the following new quantities for each material item: **25** - 2" x 4" x 8' SPF #2, **40** - 2" x 6" x 8' SPF #2, **40** - 2" x 6" x 8' SYP pressure treated, **3** - 2" x 12" x 16' SPF #2, **40** - 1/2" x 4' x 8' OSB, **20** - 10' aluminum roof edge, **5** - 24" x 50' aluminum coil stock, **8** - 2" x 3" x 10', **2** - 50 lb. 12d common nails, **4** - 2" x 3" x 10' aluminum downspouts, and **32** - 1/2" x 12" anchor bolts.

After all Level 3 students complete this assignment (please print a copy), we will call a supplier for actual prices and re-enter the unit prices to determine who has the overall closest “estimate” to the actual cost.

Math - CC.2.1.HS.F.2: Apply properties of rational and irrational numbers to solve real world or mathematical problems.



ABOUT PERCENTAGES

INSTRUCTIONS: A Building Contractor or Construction Business will be affected by **percentages** concerning money transactions each business day.

Some of these transactions include:

- 1). Single purchase discounts - (example: a cordless drill on sale)
- 2). Volume discounts - (buying a cube of lumber; 282 vs. 5 pieces)
- 3). Time discount - (Paying a bill within 30 days)

Complete the following ten PERCENTAGE job situation problems: Show all work!

1.	A carpenter buys a circular saw for \$159.95. It is currently marked with an additional 15% off. How much did he pay?
2.	A bathroom vanity list price is \$277.00. It is on sale for 20% less than the current listed price. What is the discounted price?
3.	A 32 ft. extension ladder costs \$322.00. With 6% PA sales tax, what is the total cost?
4.	A contractor receives a 3% discount for paying his bill within 30 days. The contractor's bill for this month is \$893.65. How much will she pay?
5.	A new home costs \$ 265,000.00, and the roofing costs were \$22,000.00. What percent of the total home cost was roofing?

6.	A roofer has to estimate an area of 1,750 square feet of roof to cover with architectural shingles. He adds on 5% for waste. What is the new square footage total?
7.	A bridge contractor was assessed a 4% penalty for not completing the job on time. If the contract was \$78,000.00, what was the penalty?
8.	You purchase 1 speed square @ \$18.00; 2 rip hammers @ \$16.50; 3 tape measures @ \$14.25; 2 levels @ \$26.25; and 1 stud sensor @ 12.65. What is the total cost with 6% sales tax?
9.	You were paid wages of \$ 3,025.00 for the month of December. Your foreman authorizes a 5% Christmas bonus. What is your new salary for December?
10.	The original price of a power miter saw is \$ 289.00. It is on sale for 20% off the list price. You receive an additional 4% off with a contractor's discount. What is the final reduced price you will pay?



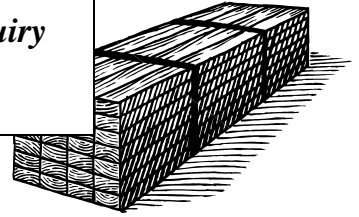
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CAUTION

- The next assignment “Prepare a Job Proposal” will challenge your technical and academic skills as you prepare for a career in the construction industry.
- You need to demonstrate initiative and maturity during this assignment.
- Complete a “Prepare a Job Proposal” and the experience will be a huge accomplishment and credit to your reputation as a person who can handle all aspects of a construction project!

Tech Writing - CC.3.6.11-12.F.: Conduct short as well as more sustained research projects to answer a question (including a self generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.



PREPARE A JOB PROPOSAL (literacy)

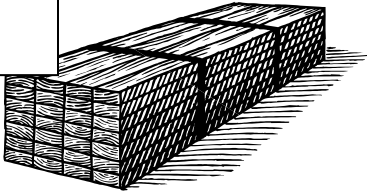
- INSTRUCTIONS:** (1). There are three parts to this assignment as described in the chart below.
 (2). A finished copy of this “Job Proposal” will be a piece of your Portfolio.
 (3). This assignment is graded separate from the Estimation Learning Guide”, and the winning bid will be chosen by the three member Recreation Board.

1.	The job you are preparing this proposal for is a recreational center for a small community in Schuylkill County.	
2.	You must prepare a set of plans which include: floor plan, side elevation, front elevation, and a cross section.	REQUIRED
3.	A materials list must also be included.	REQUIRED
4.	A “ Total Cost ” of the entire project must be included in the proposal.	REQUIRED
5.	This is a competitive completion for all current Level 3 students. The winning “ Bid ” will be decided by a panel of three Recreational Board Committee members. The winner will be recognized at the “ STC Awards Ceremony ”	
6.	BE CREATIVE: use photos, drawings, binders; make it look professional!	
7.	The Building Specifications are as follows: 1. Building dimensions: 24’ x 40’ 2. Concrete floor: 4” thick (no basement) 3. All wood framing at 16” oc 4. Ceiling height @ 10 feet 5. ADA compliant	



Remember, **MATH** controls ALL areas of a construction job: estimating, building layout, measuring, and your paycheck.

ELA – CC.1.3.11-12F: Evaluate how words and phrases shape meaning and tone in texts.

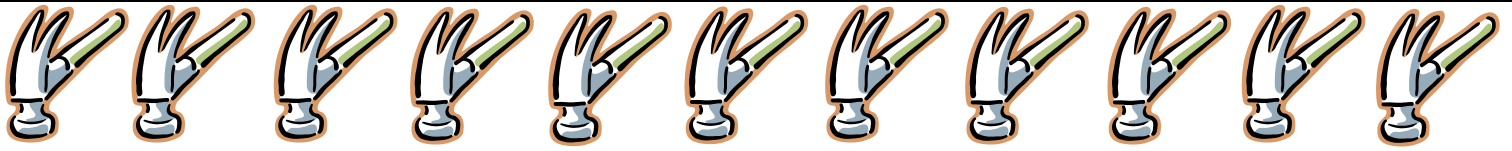


ESTIMATION POST-TEST

INSTRUCTIONS: Complete the **POST-TEST** to the best of your ability.

#	QUESTIONS:	Post-Test
1	Roofing and siding materials are estimated by the _____.	
2	Concrete is estimated and sold by the cubic _____.	
3	Molding and trim is sold by the _____ foot.	
4	The formula for calculating the Area of a triangle is $\frac{1}{2}$ Base x _____.	
5	A sheet of $\frac{1}{2}$ " x 4' x 8' drywall contains _____ sq. ft.	
6	One square foot requires _____ standard bricks.	
7	16" (oc) has a decimal equivalent of _____.	
8	16" (oc) has a fractional equivalent of _____.	
9	Fiberglass insulation would be estimated by the _____.	
10	Board Feet = <u>No. of Pieces x Thickness x Width x Length</u> <div style="text-align: center; border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">?</div>	

- STC Carpentry Program North Campus Grading Rubric -



KNOWLEDGE – 30%

LEARNING GUIDES (15%)	Works diligently to complete Learning Guides correctly?	1-100
RELATED THEORY JOBS (15%)	Drawings / Building Layout / Wall Layout / Stair Layout.	1-100
KWL READINGS (15%)	Eight construction related readings with written reports.	1-100
TESTS (30%)	Unit Tests; uses “Test Study Guide” to prepare for tests?	1-100
QUIZZES (15%)	Ten questions or problems related to POS unit (no study guide).	1-100
PORTFOLIO (10%)	As per GUIDELINES – DUE on 60th day of 90 day cycle.	1-100
HOMEWORK (15%)	Ten research projects aligned to Levels 1, 2 & 3 curriculum.	1-100

WORK ETHIC – 30%

ATTENDANCE	Good attendance and effort; completes make-up work?	10 POINTS PER DAY Non - excused absences = 0
PREPARED	Ready for carpentry work? Safety glasses? Pencil? Tape? Tool belt?	
ATTITUDE	Respectful towards other students, staff, and school property?	
INITIATIVE	Moves on to the next job without being told; does not complain?	
COOPERATION	Works effectively with others on a daily basis? Helps others?	
RESPONSIBILITY	Acts mature and is accountable in all areas throughout the day?	

SKILL (POS) – 40% (Please refer to STC Classmate “SKILLS” for conversion below)

SAFETY	Safety glasses on? Shop safety rules followed? Practices job site safety?	1-10
USE of MATERIALS	Properly select, layout, and store building materials?	1-10
USE of TOOLS	Select appropriate tools for job? Uses tools safely? Maintain and store tools?	1-10
CLEAN-UP	Job site in order? Floors swept? Tools and materials properly stored?	1-10
TASK/JOB QUALITY	Measurement & layout correct? (Square? - Level? - Plumb? - Appearance?)	1-10

STC Classmate “SKILLS” Conversion:

Master industry standards - 10

Met industry standards - 9

Met minimum industry standards independently - 8

Met minimum industry standards with support - 7

Complete task with close support below industry standards - 6

Task incomplete; limited effort - 5

Demonstrate knowledge of task with limited application - 4

Demonstrates limited knowledge of task with limited application - 3

Demonstrates no knowledge of task - 2

Task assigned; no effort - 1

Task refused - 0

~ STC CARPENTRY LG # 12 ASSESSMENT ~

#	Assignments Description:	Points	Grade
1	Order Building Materials	10	
2	Builder's Calculator	10	
3	Estimate a Residential Job	30	
4	Estimate a Commercial Job	30	
5	Estimate Masonry Materials	10	
6	About Percentages	10	
TOTAL GRADE:			
Job Proposal Assignment:			

~ COMMENTS ~



*concerning the stair "stringer" and "tread" textboxes on page 9, the two images should be exchanged; sorry for any misrepresentation..