

Section I — +/– Feet & Inches

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1. $9' 3'' - 7' 1'' =$

5. $8' 4'' + 11' 10'' =$

2. $10' 10'' + 9' 5'' =$

6. $17' 10'' - 11' 6'' =$

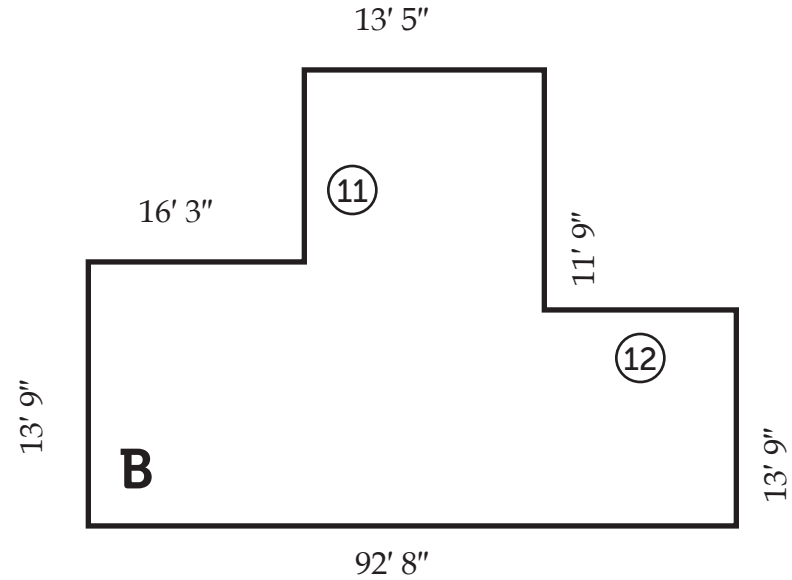
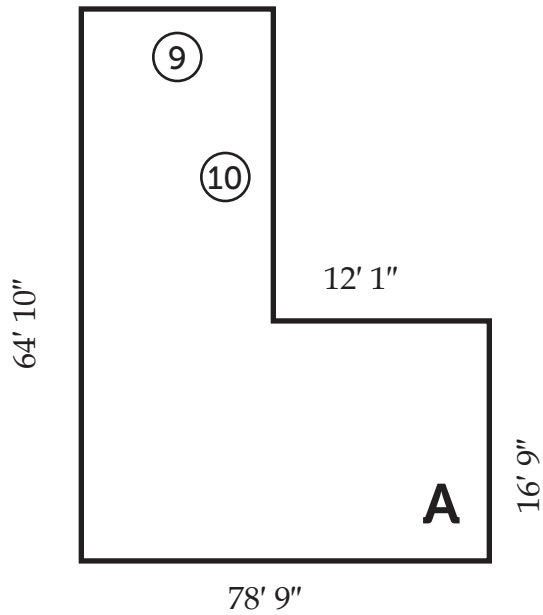
3. $13' 11'' + 10' 4'' =$

7. $9' 4'' + 9' 2'' =$

4. $17' 11'' - 1' 11'' =$

8. $12' 8'' - 6' 9'' =$

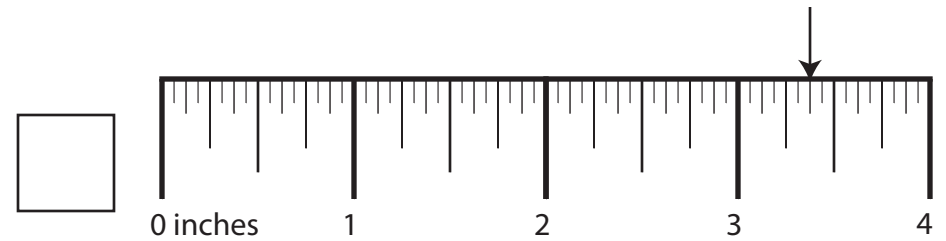
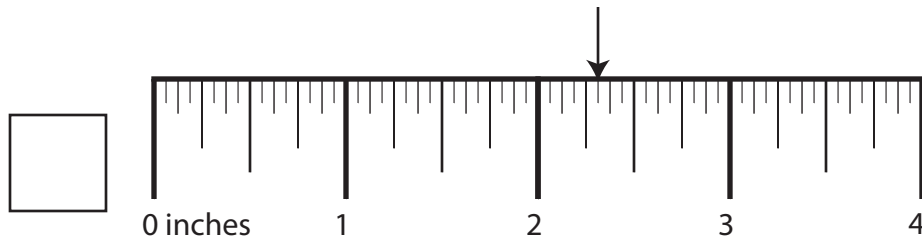
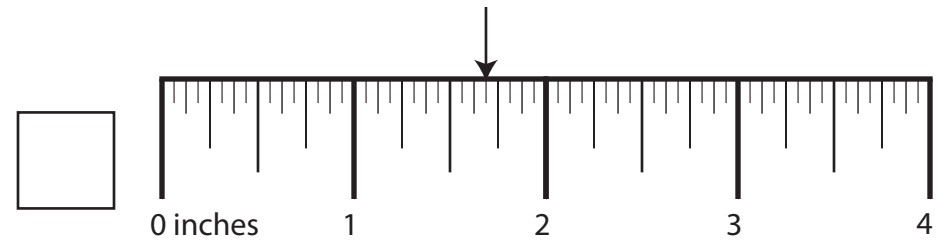
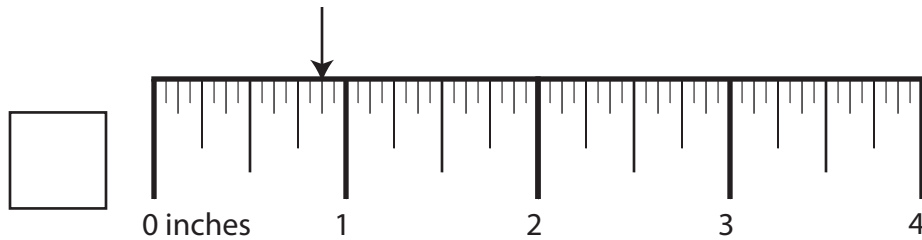
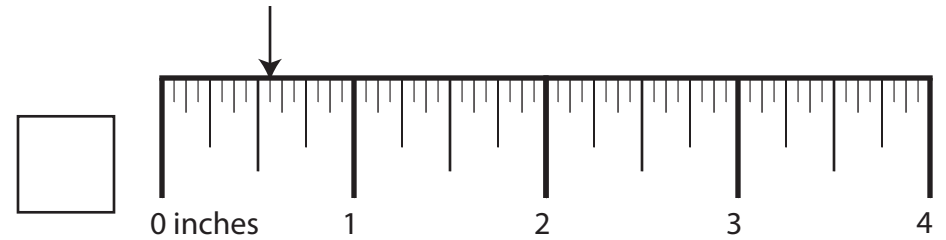
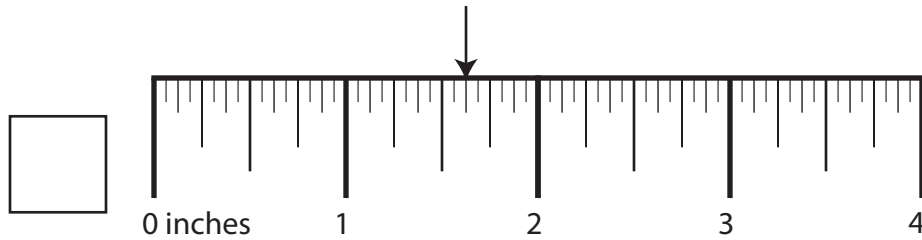
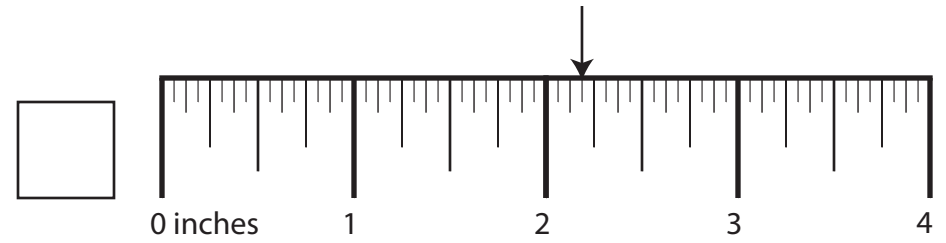
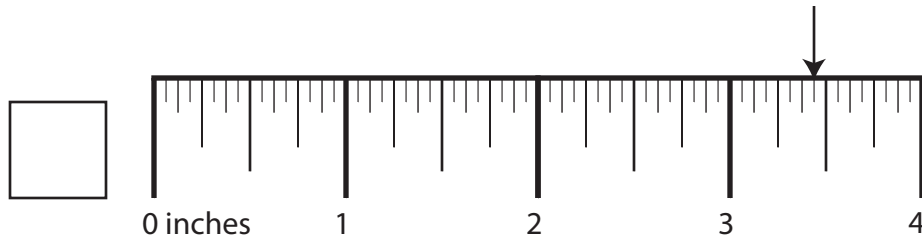
Section II – Find the Missing Side & Perimeter



Side	Length	Side	Length	Shape	Perimeter
⑨	_____	⑪	_____	A	⑬ _____
⑩	_____	⑫	_____	B	⑭ _____

Section III – Ruler Measurements

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Section IV – More/Less Than

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23. What is $\frac{1}{4}$ more than $1\frac{1}{4}$? 27. What is $\frac{3}{16}$ less than $3\frac{1}{2}$?
24. What is $\frac{1}{4}$ more than $2\frac{3}{16}$? 28. What is $\frac{1}{4}$ less than $4\frac{1}{4}$?
25. What is $\frac{3}{8}$ less than $5\frac{1}{16}$? 29. What is $\frac{1}{2}$ more than $4\frac{1}{4}$?
26. What is $\frac{1}{2}$ more than $2\frac{1}{2}$? 30. What is $\frac{1}{8}$ less than $2\frac{1}{4}$?

Section V — Nail Penetration & Screw Hole Bits

310*How far will a ...*

31. 7 penny nail penetrate a 3 ½" green beam?

What drill bit do you need to drill a ...

[Remember, # or letter only, except 27/64, 14/32, 29/64]

35. countersink hole for a 10 gauge screw?

32. 10 ½ box gauge nail penetrate a ½" dry girder?

36. countersink hole for a 16 gauge screw?

33. 12 ½ box gauge nail penetrate a 4 ½" dry frame?

37. countersink hole for a 16 gauge screw?

34. 8 box gauge nail penetrate a 4" green dimension?

38. clearance hole for a 14 gauge screw?

Section VI – **Math** Calculations**310**

39. Room B's Ceiling, made of Styrofoam, if inside is 59°F and outside is 94°F?
40. How many mmBTUs are generated by burning 399 pounds of Apple?
41. How many mmBTUs are generated by running a CGi-3 for 10 days?
42. How many mmBTUs are generated by running a ET 110-H for 1 months?
43. Room B's TSA, made of Brick, insulating, if inside is 74°F and outside is 72°F?
44. Heptane cycle, 1415 (lb/hr) flowrate, outside is 83°F, inside 44°F?
45. How many mmBTUs are generated by burning 262 pounds of Cherry?
46. How many pounds of CO₂ are released by burning 299 pounds of Jack Pine?

Section VI – **Math** Calculations**310**

47. How many mmBTUs are generated by running a EG-50 for 5 hours?
48. How many pounds of CO₂ are released by burning 482 pounds of Hickory?
49. Alcohol, methyl. 40 - 50oF cycle, 734 (lb/hr) flow-rate, outside is 76°F, inside 68°F?
50. How many pounds of CO₂ are released by burning 110 pounds of Cottonwood?
51. Room A's 4 Walls, made of Glass, window, if inside is 63°F and outside is 5°F?
52. How many mmBTUs are generated by burning 363 pounds of Beech?
53. How many mmBTUs are generated by running a GV90+6 for 8 days?
54. How many mmBTUs are generated by running a CGa-6 for 8 hours?

Section VII – Blueprint Calculations

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55. Shape A, Scale = 24, molding job. 59. Shape H, Scale = 32, panel job.

56. Shape A, Scale = 50, baseboard job 60. Shape R, Scale = 50, panel job.

57. Shape A, Scale = 30, wire job. 61. Shape L, Scale = 30, molding job.

58. Shape I, Scale = 35, paint job. 62. Shape O, Scale = 24, brick job.