***Forward this to people having trouble with questions 42-61 on the construction quiz*.**

See the red information below.

Email me with any other concerns.

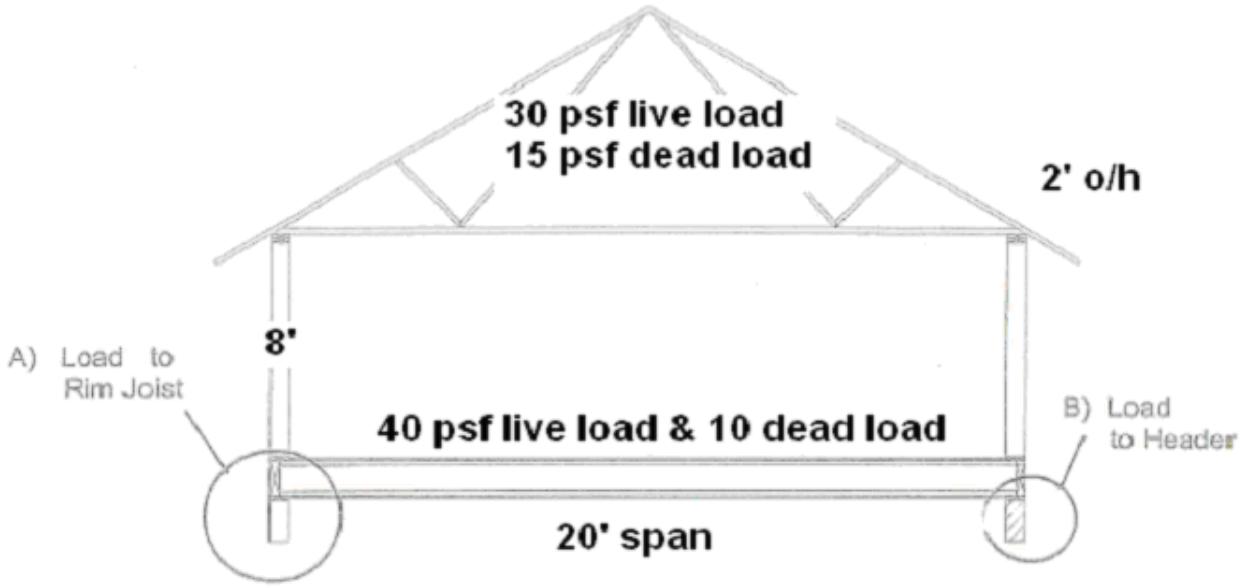
Gary and Amy

Finding Single-Story Loads (PLF)

(A) Load to Rim Joist

(B) Load to Header

Given: Weight of wall = **8** psf
(includes weight of studs, sheathing, insulation, etc..



Note: Use only 1/2 of the span for roof and floor loads.
Overhangs should be included in the roof loads.

Use above information for questions 42-45 below

42. What would the plf to the rim (A) be? note: include roof, overhang, and wall loads only

a. 1104
b. 604
c. 514
d. 800

Half of the roof span plus the overhang 10' + 2' = 12'. 12' x 45 (total load) = 540 psf. Add 8' tall wall at 8 lb per square foot. 8 x 8 = 64 psf. Don't add any floor load at this point.

540 psf + 64 psf = 604 plf

43. If the load to header (B) had a 12' wide header, what would the plf be?

a. 1104
b. 604
c. 514
d. 800

Add half of the floor load to the above answer #42. 10' x 50 psf = 500 psf + 604 psf = 1104 plf

44. If the load to header (B) had a 12' wide header, what would total header load be?

a. 13248
b. 7248
c. 6168
d. 8080

Above answer #43 x 12'. 1104 plf x 12 = 13248

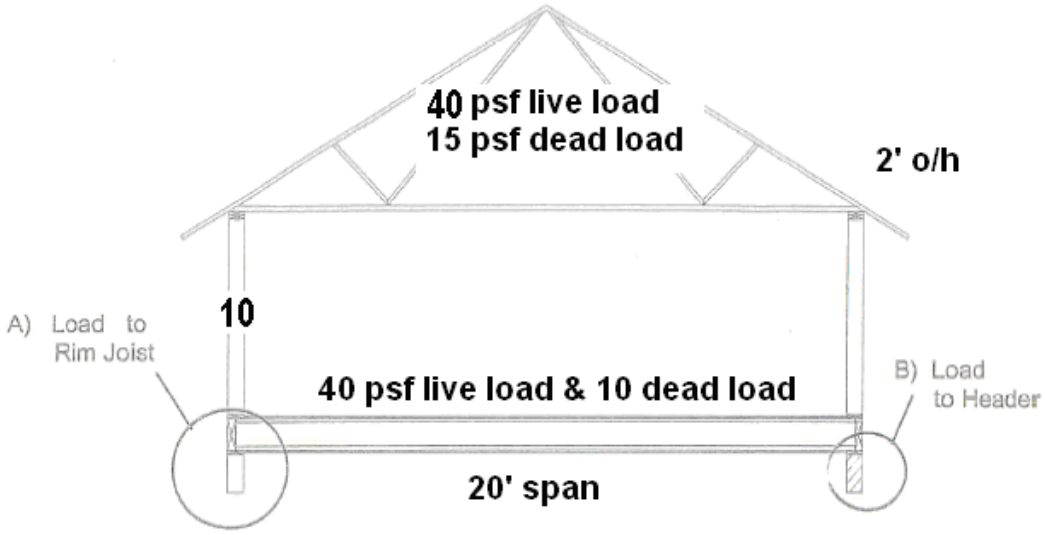
45. How much load would be on each set of trimmer studs in question 44?

a. 6624
b. 3624
c. 3084
d. 8080

Half of the above answer #44 is the load on each trimmer. 13248 x .5 = 6624

Finding Single-Story Loads (PLF)
(A) Load to Rim Joist
(B) Load to Header

Given: Weight of wall = **10** psf
(includes weight of studs, sheathing, insulation, etc..



Note: Use only 1/2 of the span for roof and floor loads.
Overhangs should be included in the roof loads.

Use above information for questions 46-50 below

46. What would the plf to the rim a (A) be?
    a. 1770
    b. 1880
    c. 760
    d. 1960

This series of questions are the same as the above (# 42-45) with a 10 psf wall load and 55lb total roof load. Use my above information from the questions #42-45 to answer the questions.

47. What would the plf to the rim on the (B-side) be?
    a. 1770
    b. 1880
    c. 760
    d. 1960

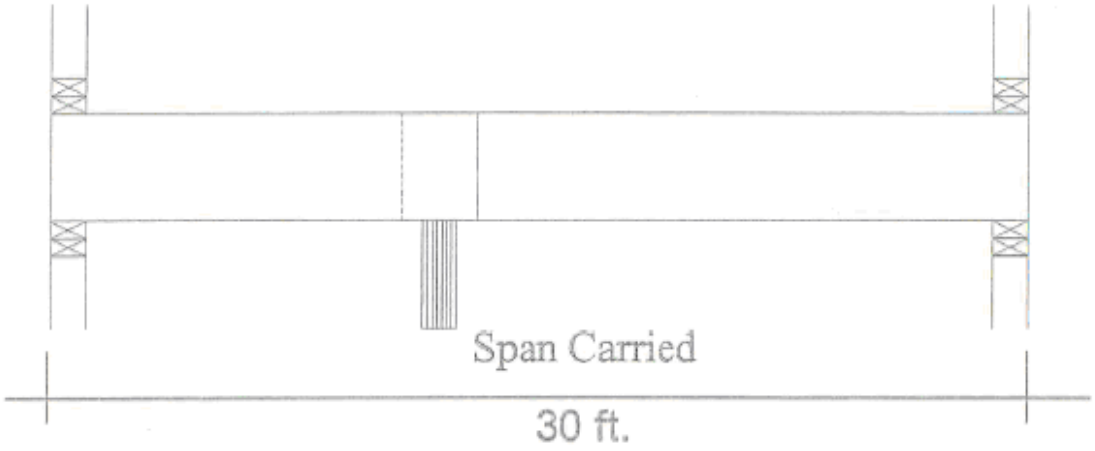
48. The plf for header (B) would be?
    a. 1770
    b. 1880
    c. 1260
    d. 1960

49. If the load to header (B) had a 14’ wide header, what would total header load be?
    a. 26320
    b. 24780
    c. 17640
    d. 26150

50. How much load would be on each set of trimmer studs in question 49?
    a. 13160
    b. 12390
    c. 8820
    d. 13075

Finding Interior Floor Beams (PLF) case #1 Joists not Continuous

Given:
Live load: **40** psf
Dead load: **15** psf
Total load: _____ psf



Note: The beam carries only 1/2 of the span or 15'. Each wall below carries ¼ of the span on each side.

Formula:

Load to beam (PLF) = span carried x 0.5 x PSF

	Span Carried	X	0.5	X	PSF	=	Load to Beam
Live Load		X	0.5	X		=	
Total Load		X	0.5	X		=	

Use above information for questions 51-54 below

51. What is the psf for this floor?
    a. 40
    b. 45
    c. 50
    d. 55

40 live + 15 dead = ?

52. What is the plf live load on the center beam?
    a. 1200
    b. 600
    c. 825
    d. 1650

30' x .5 x 40 = ?

53. What is the plf dead load on the center beam?
    a. 450
    b. 225
    c. 825
    d. 600

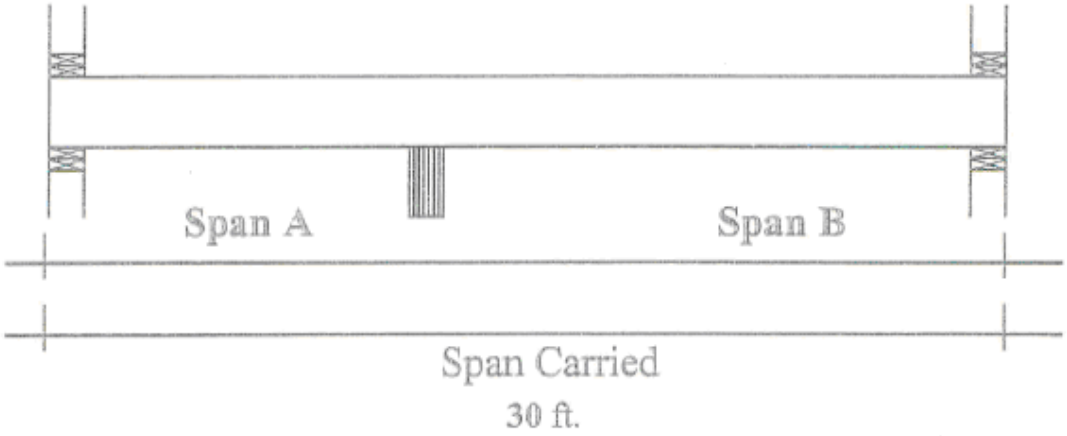
30' x .5 x 15 = ?

54. What is the plf total load on the center beam?
    a. 1200
    b. 600
    c. 825
    d. 1650

30' x .5 x (40 live + 15 dead) = ?

Finding Interior Floor Beams (PLF) case #2 Joists Continuous

Given: Live load: **40** psf
Dead load: **10** psf
Total load: _____ psf



Formula:
Load to beam (PLF) = span carried x 0.625 x PSF

	Span Carried	X	0.625	X	PSF	=	Load to Beam
Live Load		x	0.625	X		=	
Total Load		X	0.625	X		=	

Use above information for questions 55-58 below

55. What is the total psf for this floor?
    a. 40
    b. 45
    c. 50
    d. 55

40 live + 10 dead = ?

56. What is the plf live load on the center beam?
    a. 1200

b. 750
c. 600
d. None of the above

See formula box above: 30’ x .625 x 40 live = ?

57. What is the plf dead load on the center beam?
a. 45.25
b. 187.5
c. 82.5
d. 90.75

See formula box above: 30’ x .625 x 10 dead = ?

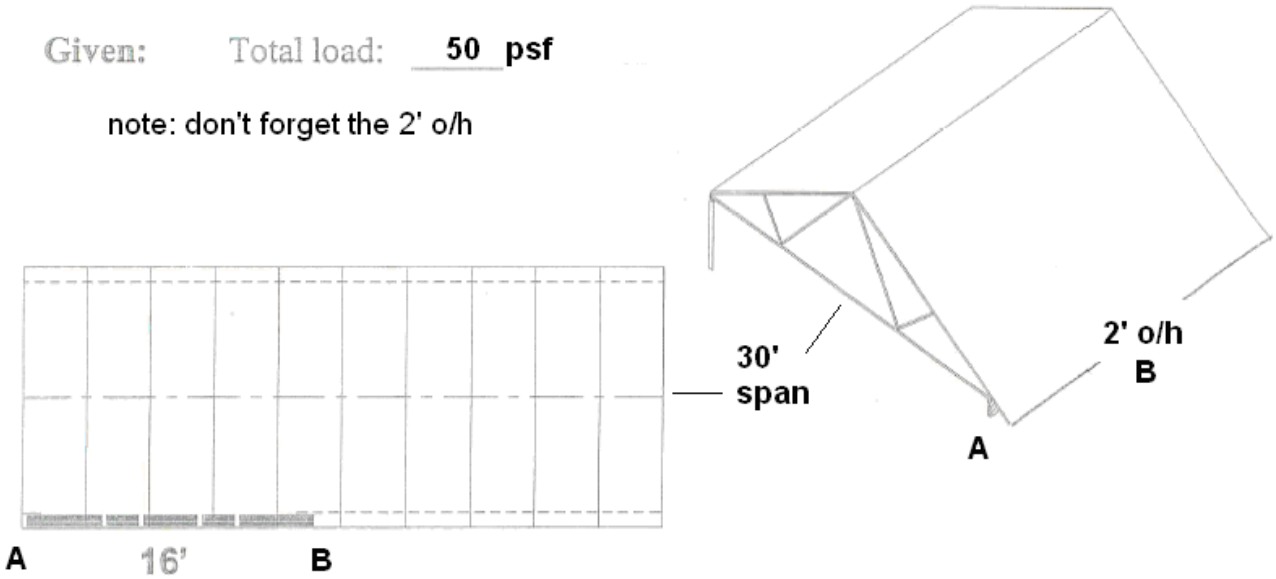
58. What is the plf total load on the center beam?
a. 1200
b. 600
c. 937.5
d. 1650

See formula box above: 30’ x .625 x (40 live + 10 dead) = ?

Finding Beam or Header End Reaction - Load at Support at End of Beam

Given: Total load: **50** psf

note: don't forget the 2' o/h



Formula:

End reaction (lbs) = beam span x 0.5 x PLF

Span	X	0.5	X	PLF	=	End Reaction
	X	0.5	X		=	

Use above information for questions 59-61 below

59. What is the total load at the end support (A)?
    a. 6000
    b. 6800
    c. 600
    d. 680

(30’ span x .5) + 2’ overhang = 17’. 17” x 50 lbs total load = 850 plf. 16’ header x .5 = 8’. 8 x 850 = ?

60. What is the total load at the end support (B)?
    a. 6000
    b. 6800
    c. 600
    d. 680

61. What is the total load on this header?
    a. 12000
    b. 13600
    c. 1200
    d. 1360

16’ header x total plf (850) =?