Calculating Your Attic Ventilation Requirements

Example:
Calculating the number of attic vents needed for a 30'x 40' attic

STEP 1..... ***Calculate attic square footage***
How: Multiply length of attic (in feet) times width of attic (in feet)
30' x 40' = 1,200 square feet

STEP 2.....Calculate NFA (Net Free Area of ventilation) needed for this attic by using the "1:150" rule
How: Divide attic square footage by 150
1,200 sq. ft. ÷ 150 = 8 square feet of NFA needed

STEP 3.....Convert square feet of NFA to square inches
How: Multiply square feet of NFA by 144
8 *sq. ft. x 144 = 1152 square inches of NFA needed*

STEP 4.....Split the amount of NFA needed equally between the intake and the exhaust (High and Low vents)
How: Divide square inches of NFA needed by 2
1152 sq. in. ÷ 2 = 576 square inches of NFA needed equally for "High" & "Low" (a least 30% of the "High" NFA is within 2 feet vertical distance of the roof ridge).

STEP 5.....Calculate # of gable, dormer, and/or eave vents needed
NFA per vent varies on manufacture and design: Some examples:
18"x24" Rectangle Gable vents can range from:
60 to 150 sq.in. of NFA
4"x16" Eave vents have approx. 22 sq.in. of NFA
Dormer vents can range from 50 to 100 sq.in. of NFA

STEP 6.....**Example....Type "A" Dormer vents = 100 sq.in NFA - Type "B" Eave vents = 22 sq.in. NFA**
576 sq.in. "High" NFA ÷ 100 = 5.76 or 6 Type "A" Dormer vents
576 sq.in. "Low" NFA ÷ 22 = 26.18 or 26 Type "B" Eave vents

Provide Calculations Below or See Chart Below:

1. _____attic length **X** _____attic width= _____Attic Square Footage.
2. _____Attic sq. ft. **÷ 150 =** _____NFA sq. ft.
3. _____NFA sq. ft. **X 144 =** _____sq. inches of NFA.
4. _____NFA sq. inches **÷ 2 =**_____sq. in. "High" and _____sq. in. "Low".
5. Provide the sq. in. of NFA for the proposed type of vents:
   _____sq. in. Dormer Vent _____sq. in. Eave Vents _____sq. in. Others
6. _____sq. in. "High" NFA ÷ _____sq. in. **=** _____ of _____Vents.
   _____sq. in. "Low" NFA ÷ _____sq. in. **=** _____ of _____ Vents.

Building Square Footage	Vent. Area sq. in. (total)	30% of Free Ventilation Area Within 24" of the Ridge	Building Square Footage	Vent. Area sq. in. (total)	30% of Free Ventilation Area Within 24" of the Ridge
1000	960	288	2000	1920	576
1100	1056	317	2100	2016	605
1200	1152	346	2200	2112	634
1300	1248	374	2300	2208	662
1400	1344	403	2400	2304	691
1500	1440	432	2500	2400	720
1600	1536	461	2600	2496	749
1700	1632	490	2700	2592	778
1800	1728	518	2800	2688	806
1900	1824	547	2900	2784	835