Problem Description

we are to create a function that says yes if the number is above 5000 psi and says no if its below or equal to 5000 psi. Then we calculate the descriptive data and create a histogram.

Input Section:

Calculation Section:

Output Section:

number of compression values greater than 5000 psi	=COUNTIF(A12:A111, ">50
number of total data points	=COUNT(A12:A111)
percentage of measurements above 5000 psi	=(F6/F7)*100%
minimum	=MIN(A12:A111)
maximum	=MAX(A12:A111)
range	=F10-F9
mean	=AVERAGE(A12:A111)
Standard Deviation	=STDEV(A12:A111)

Table 1: Given data of compression strength tests of a piece of 2x4 southern pine lumber

compression strength [psi]	yes if the number in column a is greater than 5000, otherwise no
4105.54589887834	=IF(COUNTIF(A12, ">5000"), "yes", "no")
5194.31820029788	=IF(COUNTIF(A13, ">5000"), "yes", "no")
4811.47308320498	=IF(COUNTIF(A14, ">5000"), "yes", "no")
3045.41693481659	=IF(COUNTIF(A15, ">5000"), "yes", "no")
4341.50941165342	=IF(COUNTIF(A16, ">5000"), "yes", "no")
5780.19807836259	=IF(COUNTIF(A17, ">5000"), "yes", "no")
3515.53404996438	=IF(COUNTIF(A18, ">5000"), "yes", "no")
3748.77829992904	=IF(COUNTIF(A19, ">5000"), "yes", "no")
3673.60429628515	=IF(COUNTIF(A20, ">5000"), "yes", "no")
7872.24158048337	=IF(COUNTIF(A21, ">5000"), "yes", "no")
5499.07953868645	=IF(COUNTIF(A22, ">5000"), "yes", "no")
6013.42478052427	=IF(COUNTIF(A23, ">5000"), "yes", "no")
4224.44184206169	=IF(COUNTIF(A24, ">5000"), "yes", "no")
4597.28017242865	=IF(COUNTIF(A25, ">5000"), "yes", "no")
3827.3175119815	=IF(COUNTIF(A26, ">5000"), "yes", "no")
3529.14613126731	=IF(COUNTIF(A27, ">5000"), "yes", "no")
7735.22013549174	=IF(COUNTIF(A28, ">5000"), "yes", "no")
3775.37469170935	=IF(COUNTIF(A29, ">5000"), "yes", "no")
4607.53697594315	=IF(COUNTIF(A30, ">5000"), "yes", "no")
4626.12405562304	=IF(COUNTIF(A31, ">5000"), "yes", "no")
4154.83786596629	=IF(COUNTIF(A32, ">5000"), "yes", "no")
3982.28984544877	=IF(COUNTIF(A33, ">5000"), "yes", "no")
3246.00673546398	=IF(COUNTIF(A34, ">5000"), "yes", "no")
4689.25157338182	=IF(COUNTIF(A35, ">5000"), "yes", "no")
4956.57051044806	=IF(COUNTIF(A36, ">5000"), "yes", "no")
5671.34280095125	=IF(COUNTIF(A37, ">5000"), "yes", "no")
5340.59294077726	=IF(COUNTIF(A38, ">5000"), "yes", "no")
5750.986159036	=IF(COUNTIF(A39, ">5000"), "yes", "no")
3823.51354891401	=IF(COUNTIF(A40, ">5000"), "yes", "no")
4114.00956122425	=IF(COUNTIF(A41, ">5000"), "yes", "no")
4733.44528960453	=IF(COUNTIF(A42, ">5000"), "yes", "no")
4074.01905200798	=IF(COUNTIF(A43, ">5000"), "yes", "no")
2003.15539294573	=IF(COUNTIF(A44, ">5000"), "yes", "no")
5156.63567337364	=IF(COUNTIF(A45, ">5000"), "yes", "no")
4814.38504065164	=IF(COUNTIF(A46, ">5000"), "yes", "no")
3809.1871499357	=IF(COUNTIF(A47, ">5000"), "yes", "no")
5381.10168577851	=IF(COUNTIF(A48, ">5000"), "yes", "no")
5698.10542856365	=IF(COUNTIF(A49, ">5000"), "yes", "no")
3283.69418650581	=IF(COUNTIF(A50, ">5000"), "yes", "no")
4908.54796565883	=IF(COUNTIF(A51, ">5000"), "yes", "no")
4075.20314211682	=IF(COUNTIF(A52, ">5000"), "yes", "no")
4159.75716012254	=IF(COUNTIF(A53, ">5000"), "yes", "no")
4875.31157163607	=IF(COUNTIF(A54, ">5000"), "yes", "no")
4555.43005356347	=IF(COUNTIF(A55, ">5000"), "yes", "no")
5322.50358337315	=IF(COUNTIF(A56, ">5000"), "yes", "no")
3561.96175329281	=IF(COUNTIF(A57, ">5000"), "yes", "no")
6703.62403744703	=IF(COUNTIF(A58, ">5000"), "yes", "no")
5413.15784825266	=IF(COUNTIF(A59, ">5000"), "yes", "no")
4562.43661165835	=IF(COUNTIF(A60, ">5000"), "yes", "no")
4105.51067622407	=IF(COUNTIF(A61, ">5000"), "yes", "no")
6514.61230461275	=IF(COUNTIF(A62, ">5000"), "yes", "no")
4806.69060692225	=IF(COUNTIF(A63, ">5000"), "yes", "no")
3310.87565439035	=IF(COUNTIF(A64, ">5000"), "yes", "no")
3902.60600042129	=IF(COUNTIF(A65, ">5000"), "yes", "no")
3238.08489214044	=IF(COUNTIF(A66, ">5000"), "yes", "no")
4120.14414911566	=IF(COUNTIF(A67, ">5000"), "yes", "no")
3412.82447198071	=IF(COUNTIF(A68, ">5000"), "yes", "no")
4668.26876238106	=IF(COUNTIF(A69, ">5000"), "yes", "no")
9446.42356802626	=IF(COUNTIF(A70, ">5000"), "yes", "no")
3318.59702731791	=IF(COUNTIF(A71, ">5000"), "yes", "no")
5290.32702448283	=IF(COUNTIF(A72, ">5000"), "yes", "no")
4321.91908240021	=IF(COUNTIF(A73, ">5000"), "yes", "no")
5611.38840175667	=IF(COUNTIF(A74, ">5000"), "yes", "no")
2857.75196656202	=IF(COUNTIF(A75, ">5000"), "yes", "no")
3224.28631662492	=IF(COUNTIF(A76, ">5000"), "yes", "no")
3275.45766193391	=IF(COUNTIF(A77, ">5000"), "yes", "no")
4183.80330750762	=IF(COUNTIF(A78, ">5000"), "yes", "no")
4025.01914014984	=IF(COUNTIF(A79, ">5000"), "yes", "no")
3965.03460726058	=IF(COUNTIF(A80, ">5000"), "yes", "no")
3862.15961592536	=IF(COUNTIF(A81, ">5000"), "yes", "no")
4721.27087324162	=IF(COUNTIF(A82, ">5000"), "yes", "no")
3906.96094721754	=IF(COUNTIF(A83, ">5000"), "yes", "no")
3887.61318990163	=IF(COUNTIF(A84, ">5000"), "yes", "no")
4174.21558215154	=IF(COUNTIF(A85, ">5000"), "yes", "no")
4285.37717997694	=IF(COUNTIF(A86, ">5000"), "yes", "no")
6205.47830648411	=IF(COUNTIF(A87, ">5000"), "yes", "no")
4320.51034216122	=IF(COUNTIF(A88, ">5000"), "yes", "no")
3869.12562561265	=IF(COUNTIF(A89, ">5000"), "yes", "no")
2467.09727550872	=IF(COUNTIF(A90, ">5000"), "yes", "no")
3734.99487523959	=IF(COUNTIF(A91, ">5000"), "yes", "no")
4657.46351875361	=IF(COUNTIF(A92, ">5000"), "yes", "no")
4046.93908458431	=IF(COUNTIF(A93, ">5000"), "yes", "no")
3554.1263026253	=IF(COUNTIF(A94, ">5000"), "yes", "no")
6300.1055267657	=IF(COUNTIF(A95, ">5000"), "yes", "no")
6960.62441752097	=IF(COUNTIF(A96, ">5000"), "yes", "no")
4594.91355335327	=IF(COUNTIF(A97, ">5000"), "yes", "no")
6401.04932289251	=IF(COUNTIF(A98, ">5000"), "yes", "no")
3934.83172720091	=IF(COUNTIF(A99, ">5000"), "yes", "no")
4797.06725600287	=IF(COUNTIF(A100, ">5000"), "yes", "no")
5980.92750759071	=IF(COUNTIF(A101, ">5000"), "yes", "no")
5119.91074320138	=IF(COUNTIF(A102, ">5000"), "yes", "no")
10772.7016356458	=IF(COUNTIF(A103, ">5000"), "yes", "no")
4391.13352871679	=IF(COUNTIF(A104, ">5000"), "yes", "no")
6895.28362599982	=IF(COUNTIF(A105, ">5000"), "yes", "no")
5609.7803258481	=IF(COUNTIF(A106, ">5000"), "yes", "no")
6235.10685390824	=IF(COUNTIF(A107, ">5000"), "yes", "no")
8161.88941767905	=IF(COUNTIF(A108, ">5000"), "yes", "no")
5570.84782212273	=IF(COUNTIF(A109, ">5000"), "yes", "no")
5740.28576994268	=IF(COUNTIF(A110, ">5000"), "yes", "no")
8331.40434225078	=IF(COUNTIF(A111, ">5000"), "yes", "no")

compression strength

histogram x-axis bins: [2003.2, 2880.1] (2880.1, 3757.1] (3757.1, 4634.0] (4634.0, 5511.0] (5511.0, 6387.9] (6387.9, 7264.9] (7264.9, 8141.8] (8141.8, 9018.8] (9018.8, 9895.7] (9895.7, 10772.7]