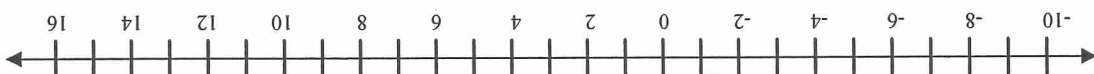


- D. Solutions:
- a. English: All real #'s less than 2.
 - b. Algebraic: $x < 2$
 - c. Interval notation: $(-\infty, 2)$
 - d. Set builder notation: $\{x | x < 2\}$
 - e. Number line:

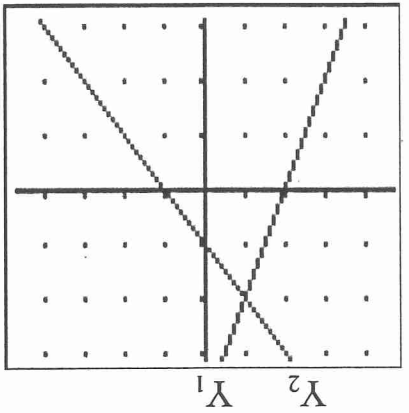
provides boundary value.

$x = -2$		
4	2	0
3	1.5	0
2	-1	-1
1	-1.5	-2
0	-2	-3
-1	-2.5	-4
-2	-3	-5
-3	-3.5	-6
-4	-4	-7
-5	-4.5	-8
-6	-5	-9
-7	-5.5	-10
-8	-6	-11
-9	-6.5	-12
-10	-7	-13
-11	-7.5	-14
-12	-8	-15
-13	-8.5	-16
-14	-9	-17
-15	-9.5	-18
-16	-10	-19
-17	-10.5	-20
-18	-11	-21
-19	-11.5	-22
-20	-12	-23
-21	-12.5	-24
-22	-13	-25
-23	-13.5	-26
-24	-14	-27
-25	-14.5	-28
-26	-15	-29
-27	-15.5	-30
-28	-16	-31
-29	-16.5	-32
-30	-17	-33
-31	-17.5	-34
-32	-18	-35
-33	-18.5	-36
-34	-19	-37
-35	-19.5	-38
-36	-20	-39
-37	-20.5	-40
-38	-21	-41
-39	-21.5	-42
-40	-22	-43
-41	-22.5	-44
-42	-23	-45
-43	-23.5	-46
-44	-24	-47
-45	-24.5	-48
-46	-25	-49
-47	-25.5	-50
-48	-26	-51
-49	-26.5	-52
-50	-27	-53
-51	-27.5	-54
-52	-28	-55
-53	-28.5	-56
-54	-29	-57
-55	-29.5	-58
-56	-30	-59
-57	-30.5	-60
-58	-31	-61
-59	-31.5	-62
-60	-32	-63
-61	-32.5	-64
-62	-33	-65
-63	-33.5	-66
-64	-34	-67
-65	-34.5	-68
-66	-35	-69
-67	-35.5	-70
-68	-36	-71
-69	-36.5	-72
-70	-37	-73
-71	-37.5	-74
-72	-38	-75
-73	-38.5	-76
-74	-39	-77
-75	-39.5	-78
-76	-40	-79
-77	-40.5	-80
-78	-41	-81
-79	-41.5	-82
-80	-42	-83
-81	-42.5	-84
-82	-43	-85
-83	-43.5	-86
-84	-44	-87
-85	-44.5	-88
-86	-45	-89
-87	-45.5	-90
-88	-46	-91
-89	-46.5	-92
-90	-47	-93
-91	-47.5	-94
-92	-48	-95
-93	-48.5	-96
-94	-49	-97
-95	-49.5	-98
-96	-50	-99
-97	-50.5	-100
-98	-51	-101
-99	-51.5	-102
-100	-52	-103
-101	-52.5	-104
-102	-53	-105
-103	-53.5	-106
-104	-54	-107
-105	-54.5	-108
-106	-55	-109
-107	-55.5	-110
-108	-56	-111
-109	-56.5	-112
-110	-57	-113
-111	-57.5	-114
-112	-58	-115
-113	-58.5	-116
-114	-59	-117
-115	-59.5	-118
-116	-60	-119
-117	-60.5	-120
-118	-61	-121
-119	-61.5	-122
-120	-62	-123
-121	-62.5	-124
-122	-63	-125
-123	-63.5	-126
-124	-64	-127
-125	-64.5	-128
-126	-65	-129
-127	-65.5	-130
-128	-66	-131
-129	-66.5	-132
-130	-67	-133
-131	-67.5	-134
-132	-68	-135
-133	-68.5	-136
-134	-69	-137
-135	-69.5	-138
-136	-70	-139
-137	-70.5	-140
-138	-71	-141
-139	-71.5	-142
-140	-72	-143
-141	-72.5	-144
-142	-73	-145
-143	-73.5	-146
-144	-74	-147
-145	-74.5	-148
-146	-75	-149
-147	-75.5	-150
-148	-76	-151
-149	-76.5	-152
-150	-77	-153
-151	-77.5	-154
-152	-78	-155
-153	-78.5	-156
-154	-79	-157
-155	-79.5	-158
-156	-80	-159
-157	-80.5	-160
-158	-81	-161
-159	-81.5	-162
-160	-82	-163
-161	-82.5	-164
-162	-83	-165
-163	-83.5	-166
-164	-84	-167
-165	-84.5	-168
-166	-85	-169
-167	-85.5	-170
-168	-86	-171
-169	-86.5	-172
-170	-87	-173
-171	-87.5	-174
-172	-88	-175
-173	-88.5	-176
-174	-89	-177
-175	-89.5	-178
-176	-90	-179
-177	-90.5	-180
-178	-91	-181
-179	-91.5	-182
-180	-92	-183
-181	-92.5	-184
-182	-93	-185
-183	-93.5	-186
-184	-94	-187
-185	-94.5	-188
-186	-95	-189
-187	-95.5	-190
-188	-96	-191
-189	-96.5	-192
-190	-97	-193
-191	-97.5	-194
-192	-98	-195
-193	-98.5	-196
-194	-99	-197
-195	-99.5	-198
-196	-100	-199
-197	-100.5	-200



- D. Solutions:
- a. English: All real #'s less than or equal to -1.
 - b. Algebraic: $x \leq -1$
 - c. Interval notation: $(-\infty, -1]$
 - d. Set builder notation: $\{x | x \leq -1\}$
 - e. Number line:

C. We now need to decide what 'x' value(s) are represented when $Y_1 < Y_2$? Looking at the graph what 'x' value(s) did you find? Note: On our graph Y_1 and Y_2 are line representations.



5. Solve: Graphically
- A. On the graph: $Y_1 = 2x + 4$ and $Y_2 = -x + 1$
- B. Our inequality contains an equal sign. How does the graph represent this equality?
- Intersection at $x = -1$.

7. AND - OR sentences:

- A. If you are in the Math Center wearing a hat OR over 25 years old then you will get a gift certificate for \$10. If you are in the Math Center wearing a hat AND over 25 years old then you get a gift certificate for \$25.
- B. What do you think is the difference when comparing the 2 statements in part A? In the OR statement you don't have to have both yet in the AND statement you have to have both.
- C. If you were giving out gift certificates today would you anticipate giving out more of the \$10 or \$25 certificates? \$10

Explain your answer.

b/c a person only needs to meet 1 requirement.

D. AND creates which of the following patterns (Circle the correct answer):

Union of the groups (U) combine

Intersection of the groups (N) overlap

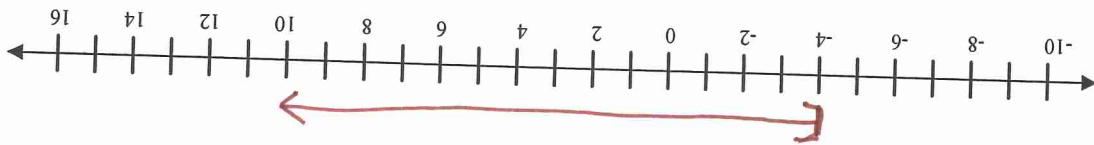
E. OR creates which of the following patterns:

Union of the groups (U) combine

Intersection of the groups (N) overlap

8. Write solution in 5 formats: $x > 1$ or $x \geq -4$

- A. English: All real #'s greater than or equal to -4.
 B. Algebraic: $x \geq -4$
 C. Interval notation: $[-4, \infty)$
 D. Set builder notation: $\{x | x \geq -4\}$
 E. Number line:



9. Write solution in 5 formats: $x < 2$ and $x \geq -5$

- A. English: All real #'s greater than or equal to -5 and less than 2.
 B. Algebraic: $-5 \leq x < 2$
 C. Interval notation: $[-5, 2)$
 D. Set builder notation: $\{x | -5 \leq x < 2\}$
 E. Number line:

