Dec 12 –

Find the ranges for the function $f(x) = 2x^2 - 2$ when the domain is $\{-2, -1, 0, 1, 2\}$

$f(-2) = 2(-2)^2 - 2$
$f(-2) = 2(4) - 2$
$f(-2) = 8 - 2$
$f(-2) = 6$

$f(-1) = 2(-1)^2 - 2$
$f(-1) = 2(1) - 2$
$f(-1) = 2 - 2$
$f(-1) = 0$

$f(0) = 2(0)^2 - 2$
$f(0) = 2(0) - 2$
$f(0) = 0 - 2$
$f(0) = -2$

$f(1) = 2(1)^2 - 2$
$f(1) = 2(1) - 2$
$f(1) = 2 - 2$
$f(1) = 0$

$f(2) = 2(2)^2 - 2$
$f(2) = 2(4) - 2$
$f(2) = 8 - 2$
$f(2) = 6$

Range
$\{-2, 0, 6\}$

* remember to show work for function notation & the proper way to write the range.

Real World Graphing

$P(c) = \$3c + \$250$

dependent variable (y-axis)

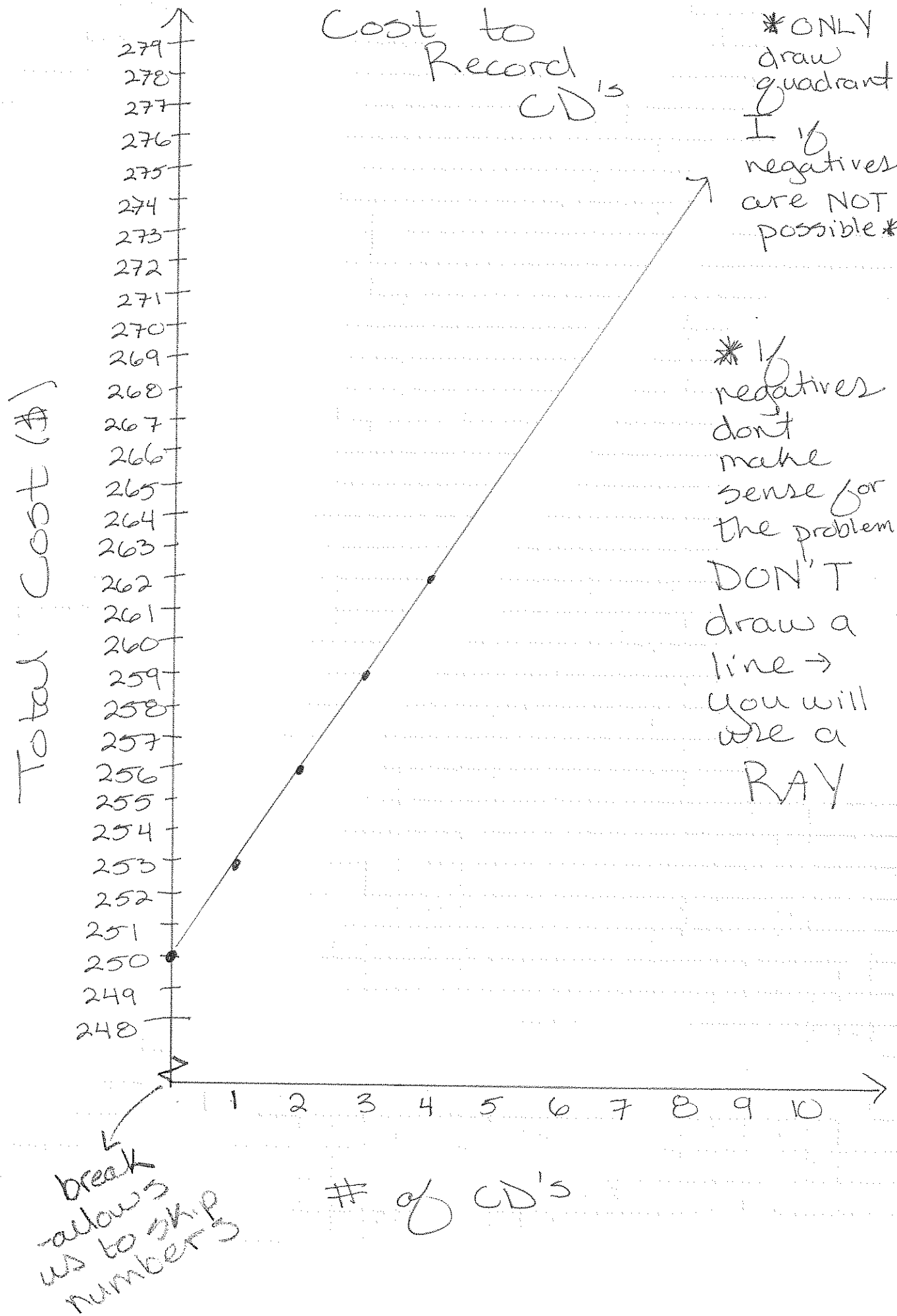
independent variable (x-axis)

c = # of CD's

P(c) = Total Cost

c	P(c)
0	250
1	253
2	256
3	259
4	262

*Don't use negatives for your domain unless it makes sense for the situatic


Cost to Record CD's
ONLY draw quadrant I b/c negatives are NOT possible
*b/c negatives don't make sense for the problem DON'T draw a line → you will see a RAY
Total Cost ($)
279
278
277
276
275
274
273
272
271
270
269
268
267
266
265
264
263
262
261
260
259
258
257
256
255
254
253
252
251
250
249
248
1 2 3 4 5 6 7 8 9 10
# of CD's
break allows us to skip numbers