

● Tropical Jake

total cost (y) = \$ 5 per t-shirt (x)

$$y = 5x$$

x	y
0	0
10	50
20	100

y int = 0 - set up

slope = 5 - price per shirt

● Just Tee's

total cost (y) = \$3, per shirt (x) + 100 set up

$$y = 3x + 100$$

x	y
0	100
10	130
20	160

y int = 100 - set-up

slope = 3 - price per shirt

Solve system of equations by substitution

$$\begin{array}{r}
 y = 5x \\
 \xrightarrow{\quad} y = 3x + 100 \\
 5x = 3x + 100 \\
 -3x \quad -3x \\
 \hline
 2x = 100 \\
 \xrightarrow{\quad} \frac{2x}{2} = \frac{100}{2} \\
 x = 50
 \end{array}$$

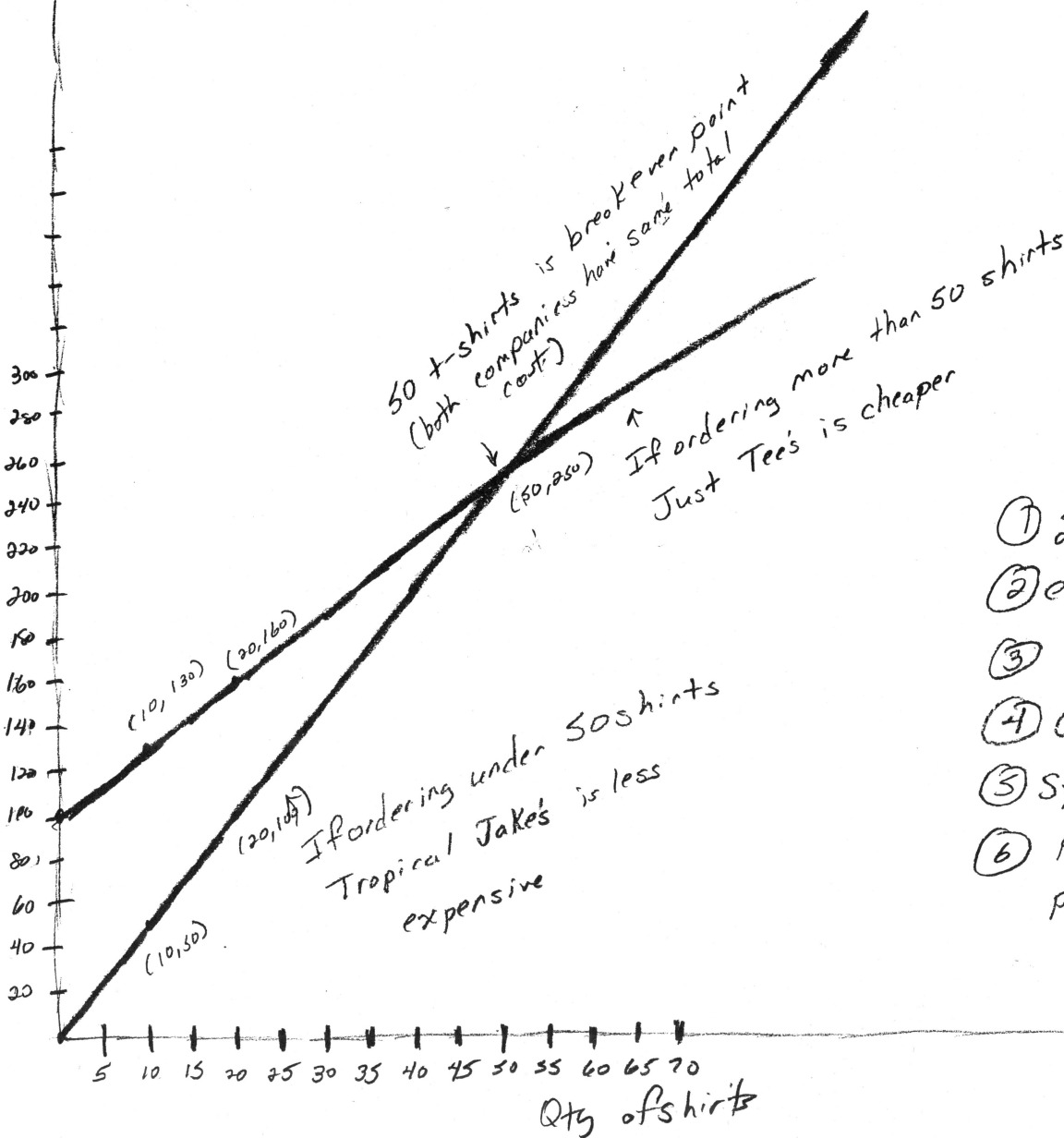
plug x into $y = 5x$ to find y

$$y = 5(50) = 250$$

Break even point occurs at (50, 250) or 50 shirts for \$250

Tropical Jake's is less if ordering under 50 shirts

Just Tee's is less if ordering over 50 shirts



- ① Equations
- ② exp of y int / slope
- ③ break even
- ④ Graph
- ⑤ Systems of equations
- ⑥ Recommendation points must be labeled