

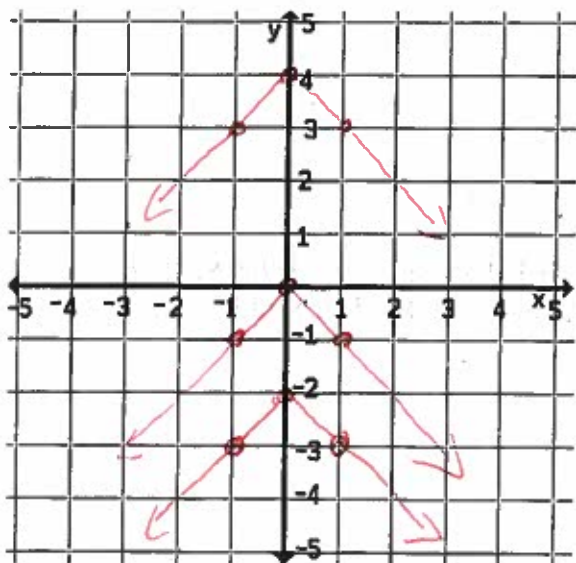
Graph these families on the same plane:

$$1. \begin{cases} y = |x| \\ y = |x-2| \\ y = |x+3| \end{cases}$$

True or False. The range is the same for all three functions. Explain your answer.

True

Range: $[0, \infty)$



$$2. \begin{cases} y = -|x| \\ y = -|x|+4 \\ y = -|x|-2 \end{cases}$$

True or False. The range is the same for all three functions. Explain your answer.

False

Range changes: ~~[-infinity, 0]~~

$(-\infty, -2]$

$(-\infty, 0]$

$(-\infty, 4]$

$$3. \begin{cases} y = |x| \\ y = |x-3|-4 \\ y = -|x+1|+3 \end{cases}$$

True or False. The domain is the same for all three functions. Explain your answer.

True

Domain: $(-\infty, \infty)$

