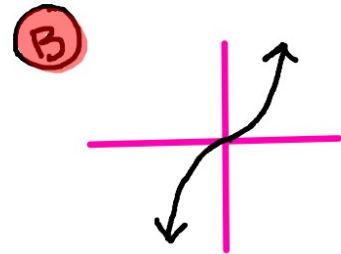
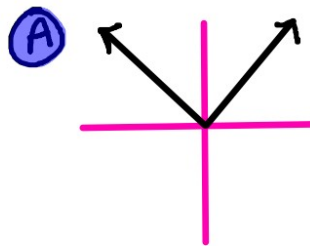


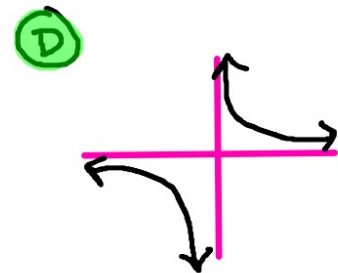
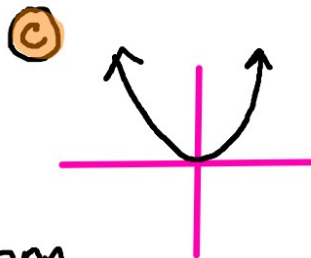
## DRILL

\* Match the function to its graph

①  $f(x) = x^3$  **B**



②  $f(x) = \frac{1}{x}$  **D**



③  $f(x) = |x|$  **A**

④  $f(x) = x^2$  **C**

⑤ Describe the transformation

of:  $f(x) = |x - 8| + 3$

← right 8      ← up 3

(Ex:)  $f(x) = -2(x+4)^3 - 3$

Annotations:   
 - 2: vertical stretch/narrow   
 (x+4): left 4   
 - 3: down 3

Describe the transformations

- Left 4 ✓
- Down 3 ✓
- Reflect over the x-axis (flip) ✓
- Vertical Stretch / Narrow ✓  
(Horizontal Compression)

$f(x) = x^3$

$f(x) = -x^3$

$$f(x) = \frac{1}{2} \sqrt{x-5} - 4$$

The equation is annotated with colored circles and arrows: a blue circle around  $\frac{1}{2}$ , a yellow circle around  $-5$  with a red arrow pointing up and the word "right" below it, and a green circle around  $-4$  with a red arrow pointing up and the word "Down" to its right.

Describe the transformations

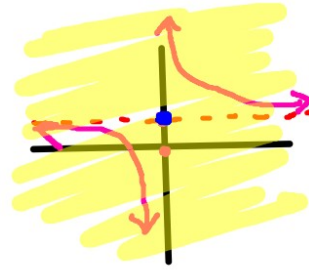
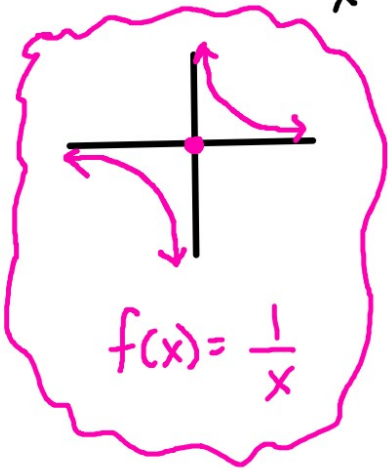
• Right 5

• Down 4

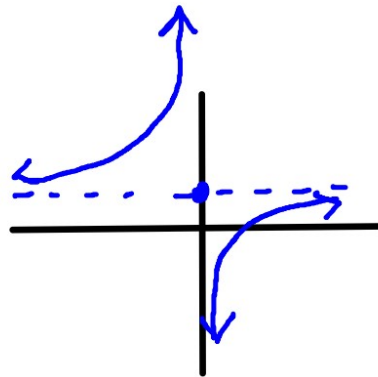
• Horizontal Stretch OR (WIDER)  
(Vertical Compression)

$$f(x) = -\frac{1}{x} + 2$$

← up 2



$$f(x) = \frac{1}{x} + 2$$



$$f(x) = -\frac{1}{x} + 2$$