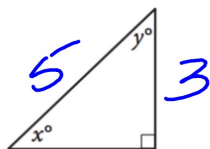


1.



$$\sin x = \frac{3}{5}$$

In the triangle above, the sine of angle  $x$  is 0.6.

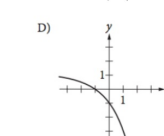
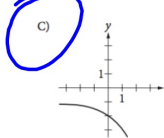
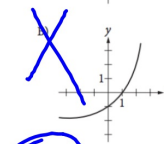
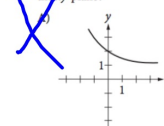
What is the cosine of angle  $y$ ?

$$\cos y = \frac{O}{H} = \frac{3}{5}$$

2.

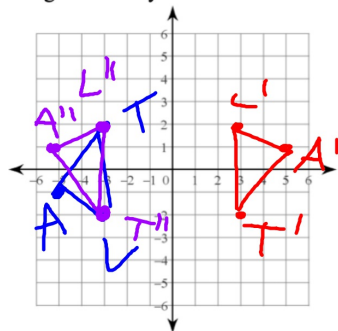
$$f(x) = 2^x + 1$$

The function  $f$  is defined by the equation above. Which of the following is the graph of  $y = -f(x)$  in the  $xy$ -plane?



$$\begin{aligned} y &= -f(x) \\ -f(x) &= -(2^x + 1) \\ &= -2^x - 1 \\ &= -2^0 - 1 \\ &= -1 - 1 \\ &= -2 \end{aligned}$$

3) Rotate  $\triangle ALT$  if  $A(-5,-1)$ ,  $L(-3,-2)$ ,  $T(-3,2)$   $180^\circ$  clockwise around the origin, then reflect the image over the  $y$ -axis.



$$\begin{aligned} A' &(5, 1) \\ L' &(3, 2) \\ T' &(3, -2) \end{aligned}$$

4) Reflect  $\triangle TAB$  if  $T(2,3)$ ,  $A(1,1)$ , and  $B(4,-3)$  over the  $x$ -axis, then translate the image by moving it left 5 and down 4.

