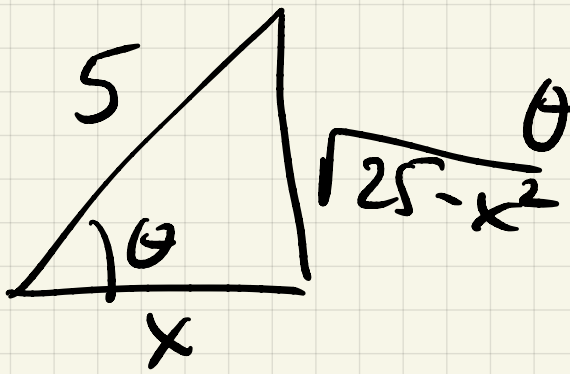
# Quiz 4

**1.** $y = \sqrt[3]{5x+7} \Rightarrow x = \sqrt[3]{5y+7} \Rightarrow$

$f$ $\qquad$ $f^{-1}$

$x^3 = 5y+7 \Rightarrow x^3-7 = 5y \Rightarrow \boxed{y = \frac{x^3-7}{5}}$

**2.**




$\theta = \arccos\frac{x}{5}$

$\tan(\arccos\frac{x}{5}) = \tan\theta = \frac{\sqrt{25-x^2}}{x}$

**3** (a) $\ln(4x-3) = 10 \Rightarrow$

$4x-3 = e^{\ln(4x-3)} = e^{10} \Rightarrow$

$4x = e^{10}+3 \Rightarrow x = \frac{e^{10}+3}{4}$

(b) $e^{3x-9} = 20 \Rightarrow$

$3x-9 = \ln(e^{3x-9}) = \ln 20 \Rightarrow$

$3x = \ln 20 + 9 \Rightarrow x = \frac{\ln 20 + 9}{3}$