

**WORKSHEET 13**  
**Inverse Functions**

**Find the inverse of each of the following functions if it exists.**

1)  $f(x) = \frac{1}{2}x + 3$

2)  $f(x) = 4x - 5$

3)  $f(x) = 4^{x+2}$

4)  $f(x) = 2^{x-3} + 1$

5)  $f(x) = \sqrt[3]{3x-2}$

6)  $f(x) = 4(x+1)^2 - 3$

7)  $f(x) = \log_6 x$

8)  $f(x) = \ln(x-2)$

9)  $f(x) = 2\log_4 x - 5$

10)  $f(x) = -\sqrt{x-4} + 6$

11)  $f(x) = (x+3)^3 - 2$

12)  $f(x) = 3^{x-20} + 1$

Below are six functions denoted by  $f(x)$  and the graphs of their inverses. Match the graph with the appropriate inverse function below.

13)  $f(x) = \log_2(x-4) + 3$

14)  $f(x) = \{(0, -4), (2, 0), (4, 4)\}$

15)  $f(x) = -\log_2 x + 2$

16)  $f(x) = (x-3)^2 - 2, x \geq 3$

17)  $f(x) = (x+3)^3 - 4$

18)  $f(x) = \frac{1}{4}x + 1$

