

## Ch 5 Sec 2

In #1 – 15, find a formula for  $f^{-1}$ 

1.  $f(x) = 2x - 9$

2.  $f(x) = \frac{x-9}{2}$

3.  $f(x) = \frac{x-9}{2}$

4.  $f(x) = x - \frac{9}{2}$

5.  $f(x) = \frac{3x+2}{x-9}$

6.  $f(x) = \frac{2x+3}{4x-5} + 7$

7.  $f(x) = \frac{2x-3}{2x+1} + 4$

8.  $f(x) = \frac{4x-1}{5x-2} + 3$

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

10.  $f(x) = \frac{5x+1}{x-2} + 3$

11.  $f(x) = \frac{x+2}{4x-3} + 1$

12.  $f(x) = \frac{7x+1}{2x-3} + 2$

13.  $f(x) = \frac{x-1}{x+3} + 1$

14.  $f(x) = \frac{x+113}{x-2} + 3$

15.  $f(x) = \frac{112x+3}{x-5} + 3$

16. Choose a formula for the inverse of  $f(x) = \frac{5x+4}{2x-1} + 3$ .

a.  $f^{-1}(y) = \frac{11y+1}{2y-1}$

b.  $f^{-1}(y) = \frac{1y+11}{2y-1}$

c.  $f^{-1}(y) = \frac{11y+1}{y-2}$

ae.  $f^{-1}(y) = \frac{11y+2}{y-1}$

be.  $f^{-1}(y) = \frac{y+1}{11y-2}$

ce.  $f^{-1}(y) = \frac{y+1}{2y-11}$

17. Which (one or more) of the completely tabulated functions at the right has an inverse function?

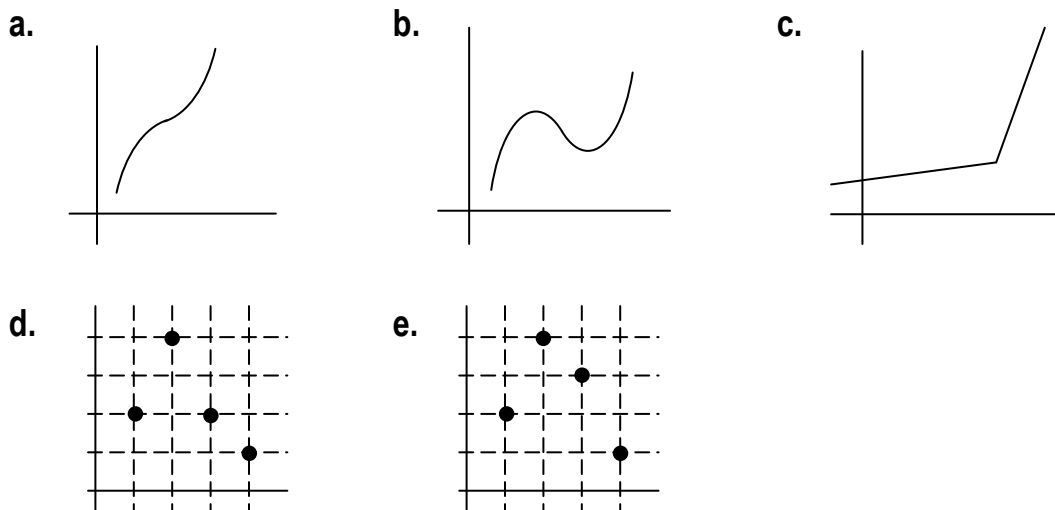
a.	
x	y
1	2
2	1
3	1
4	3

b.	
x	y
1	3
2	2
3	4
4	1

c.	
x	y
1	1
2	4
3	3
4	4

d.	
x	y
1	2
2	3
3	1
4	4

18. Which (one or more) of the functions graphed below has an inverse function?



19. Which (one or more) of the following functions has an inverse function?

a.  $f(x) = \frac{2x^3 - 7}{13}$

b.  $f(x) = \frac{2x^4 - 7}{13}$

c.  $f(x) = 7x^8 - 13$

d.  $f(x) = 13x^9 - 7$

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Invertible  
Functions

Instr: Jamieson

Answers:

1.  $f^{-1}(y) = \frac{y+9}{2}$

2.  $f^{-1}(y) = 2y+9$

3.  $f^{-1}(y) = y + \frac{9}{2}$

4.  $f^{-1}(y) = \frac{9y}{y-2}$

5.  $f^{-1}(y) = \frac{9y+2}{y-3}$

6.  $f^{-1}(y) = \frac{5y-32}{4y-30}$

7.  $f^{-1}(y) = \frac{1-y}{2y-10}$

8.  $f^{-1}(t) = \frac{2t-7}{5t-19}$

9.  $f^{-1}(x) = \frac{2x-7}{x-6}$

10.  $f^{-1}(x) = \frac{2x-5}{x-8}$

11.  $f^{-1}(x) = \frac{3x-1}{4x-5}$

12.  $f^{-1}(y) = \frac{3y-5}{2y+11}$

13.  $f^{-1}(t) = \frac{-t}{t-2}$

14.  $f^{-1}(s) = \frac{2s+107}{s-6}$

15.  $f^{-1}(y) = \frac{5y-12}{y-115}$

16. ce

17. bd

18. ace

19. ad