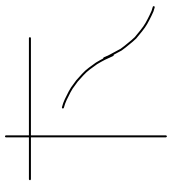
MAC 1140 *Invertible Functions* *Instr: Jamieson*

Ch 5 Sec 1

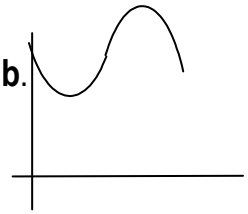
In #1 – 5, choose those that represent an invertible function of x.

1.

a.



b.



c. $y = \frac{3x^5 + 8}{2}$

2.

a.

$y = \frac{5x^4 - 9}{3}$

b.

x	y(x)
1	2
2	7
3	3
4	4
5	9

c.

x	y(x)
1	2
2	7
3	3
4	4
5	7

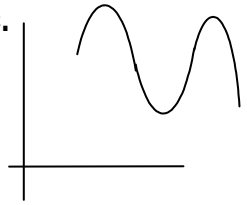
3.

a.

x	y(x)
1	4
2	2
3	3
4	6
5	4

b. $y = \frac{37x^8 - 7}{912}$

c.



4.

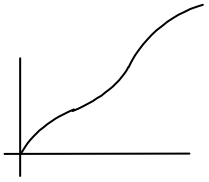
a.

x	y(x)
1	3
2	6
3	4
4	2
5	7

b.

$y = \frac{378x^9 - 715}{913}$

c.



5.

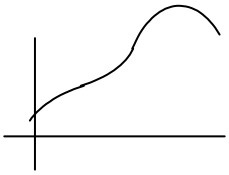
a.

x	y(x)
1	3
2	5
3	2
4	3

b.

$y = \frac{378 - 715x^9}{913}$

c.



Last updated 6/14/2011

MAC 1140

Ch 5 Sec 1

Invertible Functions

Instr: Jamieson

In #6 – 20, find a formula for f^{-1}

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Invertible Functions

Answers:

1. ac

2. b

3. none

4. abc

5. b

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

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

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

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

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

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

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

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

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

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

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

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

18. $f^{-1}(x) = \frac{-x}{x-2}$

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

20. $f^{-1}(t) = \frac{2t-12}{t-115}$