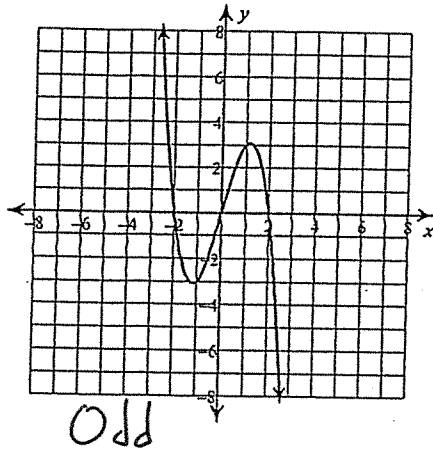


Odd & Even Functions

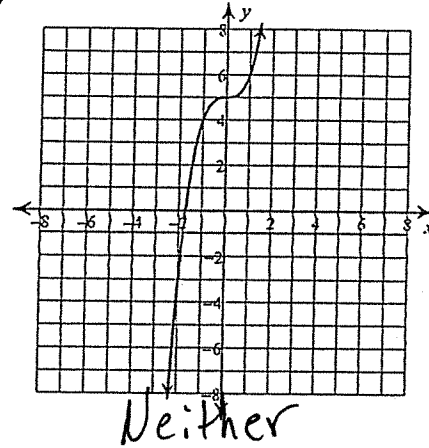
Date 10/24 Period 1st/2nd

Determine if the function is odd, even or neither from the graph.

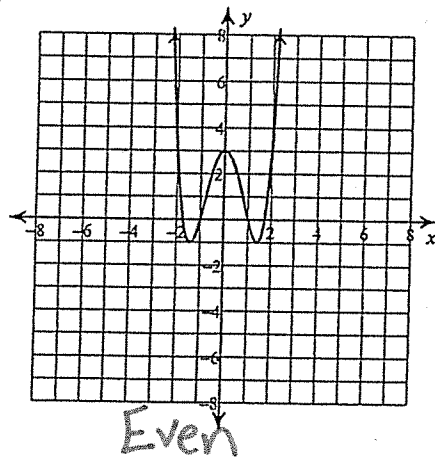
1)



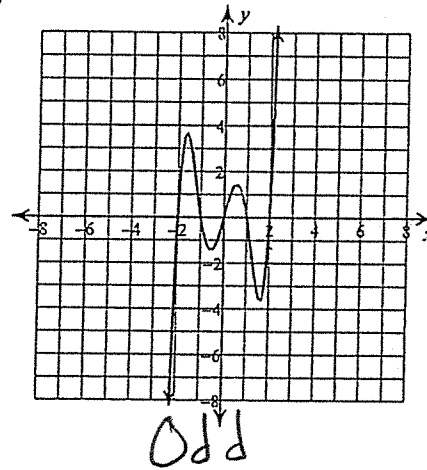
2)



3)



4)



Determine if the function is odd, even or neither algebraically.

5) $f(x) = 3x^4 - 2x^2 + 5$

Even

6) $f(x) = -5x^4 - 4x^3 + 3x^2 - 1$

Neither

7) $f(x) = -6x^5 + 3x^3 + 7x$

Odd

8) $f(x) = (x-3)(x+2)$

Neither

9) $f(x) = x(x+1)(x-1)$

Odd

10) $f(x) = -x^2(x-5)(x+5)$

Even

Assignment

Date _____ Period _____

State if the given angles are coterminal.

1) $\frac{2\pi}{9}, -\frac{20\pi}{9}$ No

3) $\frac{\pi}{2}, \frac{5\pi}{2}$ Yes

5) $\frac{25\pi}{36}, \frac{97\pi}{36}$ Yes

2) $\frac{11\pi}{12}, \frac{35\pi}{12}$ Yes

4) $\frac{10\pi}{9}, \frac{46\pi}{9}$ Yes

Find a coterminal angle between 0 and 2π for each given angle.

6) $\frac{151\pi}{36}$ $\frac{7\pi}{36}$

8) $-\frac{\pi}{12}$ $\frac{23\pi}{12}$

10) $-\frac{37\pi}{36}$ $\frac{35\pi}{36}$

12) $-\frac{3\pi}{4}$ $\frac{5\pi}{4}$

7) $-\frac{41\pi}{36}$ $\frac{31\pi}{36}$

9) $-\frac{16\pi}{45}$ $\frac{74\pi}{45}$

11) $-\frac{5\pi}{6}$ $\frac{7\pi}{6}$

13) $-\frac{19\pi}{12}$ $\frac{5\pi}{12}$

Convert each degree measure into radians and each radian measure into degrees.

14) $-\frac{11\pi}{3}$ -660°

16) $-\frac{2\pi}{3}$ -120°

18) 150° $\frac{5\pi}{6}$

20) -480° $-\frac{8\pi}{3}$

15) $\frac{8\pi}{3}$ 480°

17) $\frac{4\pi}{3}$ 240°

19) $\frac{\pi}{3}$ 60°

21) $\frac{13\pi}{6}$ 390°

Function Inverses

Date _____ Period _____

State if the given functions are inverses.

$$1) \begin{aligned} g(x) &= -4x \\ f(x) &= -6x - 1 \end{aligned}$$

No

$$2) h(n) = \frac{2}{9}n + \frac{10}{9}$$

$$f(n) = -5 + \frac{9}{2}n$$

Yes

$$3) g(n) = \frac{4}{-n+2}$$

$$f(n) = -\frac{4}{n} + 2$$

Yes

$$4) g(x) = \frac{10}{7}x - \frac{15}{7}$$

$$f(x) = -4 - \frac{4}{5}x$$

No

Find the inverse of each function.

$$5) h(x) = \frac{3}{-x-2}$$

~~$$h^{-1}(x) = \frac{3}{-x-2}$$~~

$$h^{-1}(x) = -\frac{3}{x} - 2$$

$$7) f(x) = -\frac{3}{-x-3} - 2$$

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

$$6) f(x) = \frac{2}{7}x - \frac{10}{7}$$

~~$$f^{-1}(x) = \frac{2}{7}x - \frac{10}{7}$$~~

$$f^{-1}(x) = 5 + \frac{7}{2}x$$

$$8) h(x) = -2x + 5$$

$$h^{-1}(x) = -\frac{1}{2}x + \frac{5}{2}$$

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

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

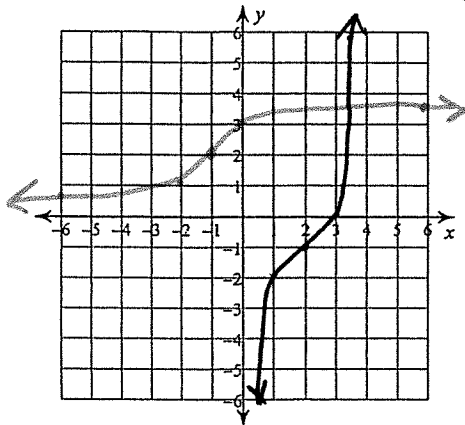
$$10) f(x) = \frac{1}{x} - 1$$

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

Find the inverse of each function. Then graph the function and its inverse.

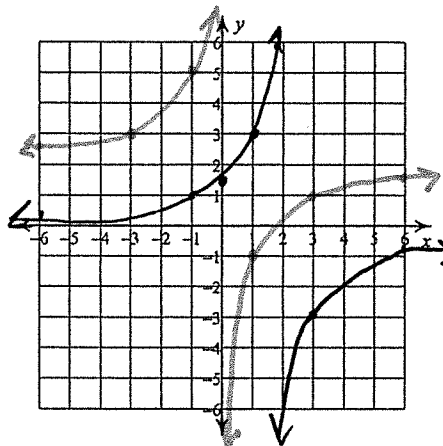
11) $f(x) = \sqrt[5]{x+1} + 2$

$f^{-1}(x) = (x-2)^5 - 1$



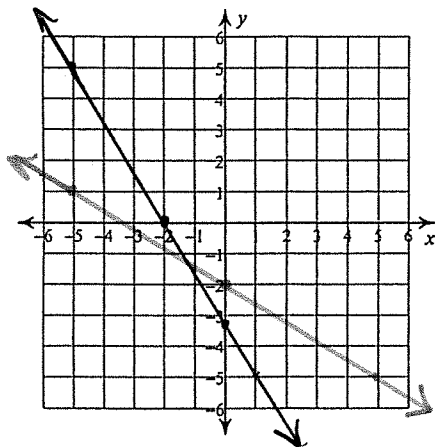
12) $f(x) = -\frac{3}{x} + 2$

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



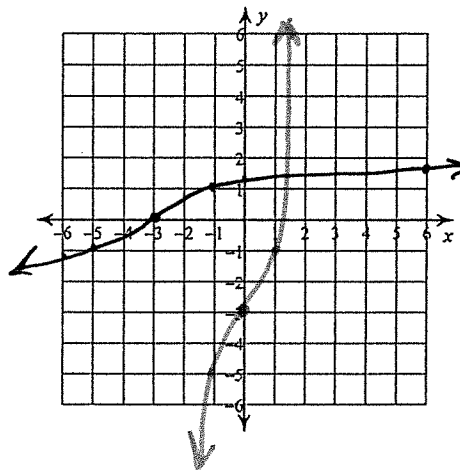
13) $g(x) = \frac{-3x-10}{5}$

$g^{-1}(x) = \frac{-5x-10}{3}$



14) $g(n) = 2n^3 - 3$

$g^{-1}(n) = \sqrt[3]{\frac{n+3}{2}}$



Critical thinking questions:

15) Give an example of a function that doesn't have an inverse.

$f(x) = x^2$

16) Find the inverse of $f(x) = \sqrt[4]{x}$

$f^{-1}(x) = x^4$ for $x \geq 0$