Pre Calc 3-4 thru 3-6 Extra Practice #2 Name _____

Determine whether the function is odd, even or neither.

1) $f(x) = 5x^3$

$f(-x) = 5(-x)^3$

$= 5(-x^3)$

$= -5x^3 \neq f(x)$ NOT EVEN

$= -f(x)$ ODD

2) $f(x) = 4x^2$

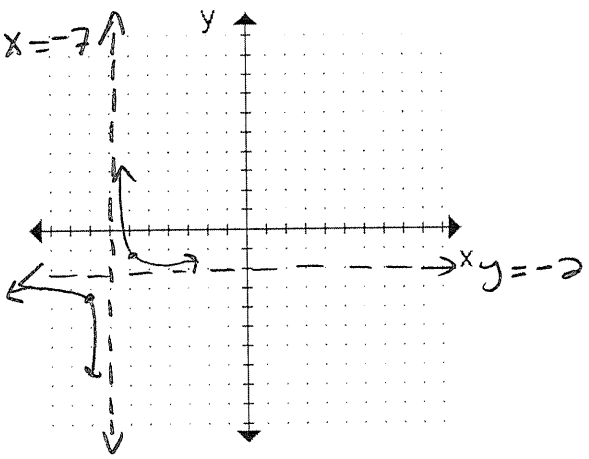
$f(-x) = 4(-x)^2$

$= 4x^2 = f(x)$ EVEN

$\neq -f(x)$ NOT ODD

3) $y = \frac{1}{(x+7)} - 2$ ↓2

L7



a) Identify any symmetry

Point $(-7, -2)$

b) Identify asymptotes

$x = -7$

$y = -2$

c) State Domain & Range

D: $\{x \mid x \neq -7\}$

R: $\{y \mid y \neq -2\}$

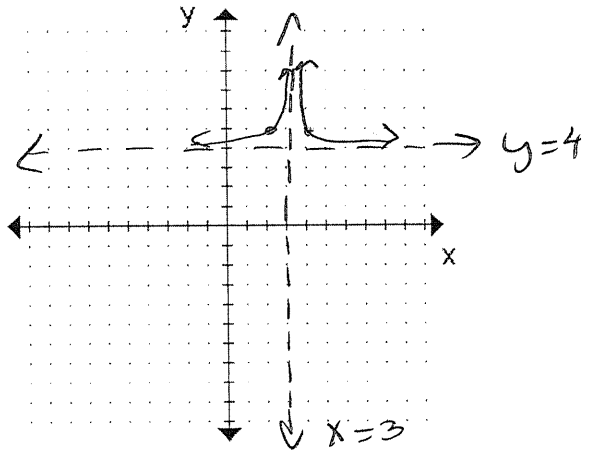
d) Describe transformation from the parent function

Left 7

Down 2

4) $y = \frac{1}{(x-3)^2} + 4$ ↑4

R3



a) Identify any symmetry

Line $x = 3$

b) Identify asymptotes

$x = 3$

$y = 4$

c) State Domain & Range

D: $\{x \mid x \neq 3\}$

R: $\{y \mid y > 4\}$

d) Describe transformation from the parent function

Right 3

Up 4

5) The parent function $y = x^2$ has been transformed by $s(x,y) = \left(\frac{x}{4}, 2y\right)$

a) Write the equation for the image. $\frac{y}{2} = (4x)^2$

b) Describe the transformation in words of the parent function mapped onto the image.

Vertical Stretch by 2

Horizontal Shrink by 1/4

6) The parent function $y = |x|$ has been transformed by $s(x,y) = \left(5x, \frac{y}{6}\right)$

a) Write the equation for the image. $6y = \left|\frac{x}{5}\right|$

b) Describe the transformation in words of the parent function mapped onto the image.

Vertical Shrink by 1/6

Horizontal Stretch by 5

7) The parent function $y = \sqrt{x}$ has been transformed by $s(x,y) = (9x, 3y)$

a) Write the equation for the image. $\frac{y}{3} = \sqrt{\frac{x}{9}}$

b) Describe the transformation in words of the parent function mapped onto the image.

Vertical Stretch by 3

Horizontal Stretch by 9

8) The test scores of 10 students are given in the table below.

Score (%)	89	76	65	88	91	94	54	41	77	82

a) Find the mean score and standard deviation for this set of data. Round to three decimal places, if needed.

$\bar{x}$: 75.7 S_x : 17.410

b) The teacher decides to curve the test scores by multiplying each score by 1.06. Give the mean score and standard deviation after the curve. Round to 3 decimal places, if needed.

$\bar{x}$: 80.242 S_x : 18.455

c) How will the third quartile, minimum, and maximum be affected by the transformation in part b?

All multiplied by 1.06