today is a late start day. Just fits.

> If a regular day, add the back side of the warm up from yesterday which was kind of tight.

Pick Up the....




Sketch the transformation $y=(x-3)^{2}-8$
2.

Sketch $y=(x)^{2}$
3. Sketch $y=x^{3} \quad$ Sketch the transformation $y=(x-6)^{3}-2$


Next Test next week

$$
\text { Friday, Feb } 23
$$

February 14, 2018


HF

$72 a$ Exponential $y=a b^{x}$
$(2,9) \quad(4,324)$

$$
y=a b^{x} \quad y=a b^{x}
$$

$$
q=a b^{2} \quad 324=a b^{4}
$$



Example of a
Parent Graph

$y=x^{2}$
for a quadratic function

Example of a
Parent Graph
Make Transformations
$y=a(x-h)^{2}+R$
$\pi$ general
equation


$$
y=x^{2}
$$

for a quadratic function

Example of a Parent Graph


$$
y=x^{2}
$$

for a quadratic function

Make Transformations


Example of a Parent Graph


$$
y=x^{2}
$$

for a quadratic function

MAKE Transformations


K general

af $y=(x+4)^{2}$

$$
\Downarrow \quad y=1.1(x-4)^{2}-5
$$

Next Few Lessons
$(2.2)$

Various New
Parent Functions

Transform using same techingles

Various New Parent Functions

Transform
using same techniques

QUICK SKetch of
5 New parents

$y=b^{x}$


$y=|x|$

$y=x^{y=\frac{1}{x}}$


Today weill focus on two of them Grid Paper or use your own


$$
y=|x| \quad \begin{array}{ll}
\text { domain: } \\
\text { range: }
\end{array}
$$



## Graph the central part

 of the function onlyfind domain and range
label any special points
be. locator points

Asymptote?

$$
y=|(x)| \quad \begin{array}{ll}
\text { domain: } \\
\text { range: }
\end{array}
$$



Graph the central part of the function only find domain and range
a Translate 7 units left, up 3, label with function

Shift right 8 units, vertically stretch by 3
c. negative orientation, right 2, down 5

Can make one darker

- $\quad-\varphi_{1}=$

$$
Y_{2}=x^{3}
$$

were Cubic

$$
y=x^{3}
$$



$$
y=x^{3} \quad \text { domain: } \quad \text { range: }
$$

Graph the function on,
find domain / range

a Shift left 8 units, up 2
b. Translate 4 units left, down 5 , negative 3 orientation. $y=-(x+4)-5$
C. shift 6 right, vertical compression of 0.5

## Assignment

## Worksheet 2.2.1 Day 1

