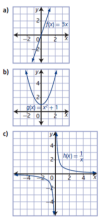
Reflections

3. Consider each gr
- Copy the graph sketch its reflec the same set of
- State the equati function in sim
- State the domai function.



9. Describe what happens to the graph of a function $y = f(x)$ after the following changes are made to its equation.

pg 28 day 4

a) Replace x with $4x$. $Y=f(4x)$

b) Replace x with $\frac{1}{4}x$. $Y=f(\frac{1}{4}x)$

c) Replace y with $2y$.

d) Replace y with $\frac{1}{4}y$.

e) Replace x with $-3x$

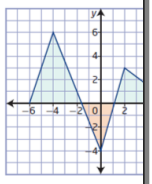
f) Replace y with $-\frac{1}{3}y$.

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

$-Y=3f(x)$

$Y=-3f(x)$

8. A weaver sets up a patter using the graph shown. A merchandise calls for the altered to $y = f(0.5x)$. Ske the new design.



Reflections & Stretches II (1.2)

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ex1: Write a mapping for the following transformations of y=f(x).

a) $y = 3f(x)$ $(x,y)\to(x,3y)$

b) $y = f(-x)$ $(x,y)\to(-x,y)$

c) $y = -f(x)$ $(x,y)\to(x,-y)$

d) $y = f(4x)$ $(x,y)\to(\frac{1}{4}x,y)$

Reflections & Stretches II (1.2)

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ex2: Given y=f(x), graph $y = -f(x)$ and then state:

V. refl.

the mapping used

$(x,y)\to(x,-y)$

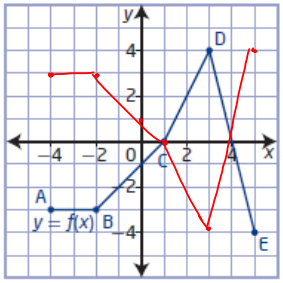
any invariant points

(1,0) (4,0)

the domain and range of the new function

$D=\{-4\le x\le 5\}$

$R=\{-4\le y\le 4\}$



Reflections & Stretches II (1.2)

pg 28 day 4

ex3: Given y=f(x), graph $y = \frac{1}{2}f(x)$ and then state:

V. comp

the mapping used

$(x,y)\to(x,\frac{1}{2}y)$

any invariant points

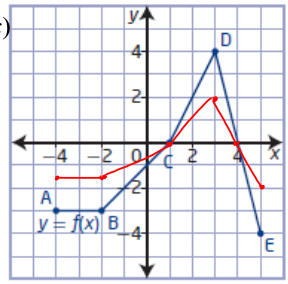
(1,0) (4,0)

the domain and range of the new function

$D=[-4,5]$

$R=[-2,2]$

interval notation



Reflections & Stretches II (1.2)

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ex4: Given y=f(x), graph $y = f(2x)$ and then state:

h. comp

the mapping used

$(x,y)\to(\frac{1}{2}x,y)$

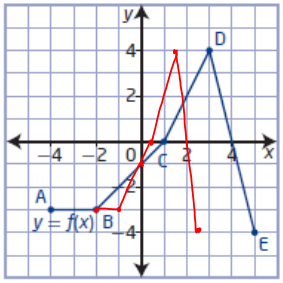
any invariant points

(0,-1)

the domain and range of the new function

$D=[-2,2.5]$

$R=[-4,4]$



Reflections & Stretches II (1.2)

pg 28 day 4

13. $D(S) = \frac{1}{30fn}S^2$ What are: S, D, f, n?

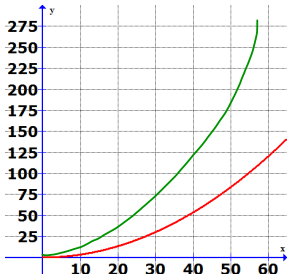
a) n=1, f=1 $f(x)=\frac{1}{30}x^2$

b) n=1, f=0.9 asphalt

f=0.8 gravel

f=0.55 snow

f=0.25 ice



C4

Reflections & Stretches II (1.2) p28 day 4

HW: p28# 14, 15, C4

quiz tomorrow

Reflections & Stretches II (1.2) p28 day 4

$$y = af(\ b(x-h))+k$$

note on mappings

$y=-f(x)$ $(x,y)\to(x,-y)$

$y=f(-x)$ $(x,y)\to(-x,y)$

$y=af(x)$ $(x,y)\to(x,ay)$

$y=f(bx)$ $(x,y)\to(\frac{1}{b}x,y)$