Radical Functions (2.1) p72 day 1

Why do people look better in masks?

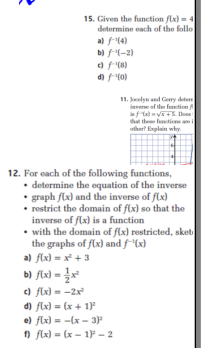
Why do we consider some people better looking?

Is beauty objective?

20. Suppose a function $f(x)$ has an inverse function, $f^{-1}(x)$.

a) Determine $f^{-1}(5)$ if $f(17) = 5$.

(5, 17) (17, 5)



Radical Functions (2.1) p72 day 1

ex1: The speed of sound changes depending on the temperature of the air according to the function $s = 331.1\sqrt{1+\frac{T}{273.15}}$ s in m/s, T in C

a) find the Domain and Range $s = 20\sqrt{T+273.15}$

D: $T + 273.15 \geq 0$

$T \geq -273.15$

R: $s \geq 0$ $[0, \infty)$

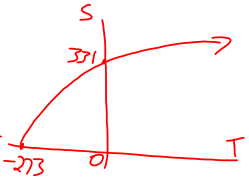
Radical Functions (2.1) p72 day 1

ex1: The speed of sound changes depending on the temperature of the air according to the function $s = 20\sqrt{T+273.15}$ s in m/s, T in C

b) find the intercepts and draw a sketch

S int: T=0 $s = 20\sqrt{0+273.15}$ $= 331$ m/s

T int: s=0 $0 = 20\sqrt{T+273.15}$ $T = -273.15$ °C



Radical Functions (2.1) p72 day 1

ex1: The speed of sound changes depending on the temperature of the air according to the function $s = 20\sqrt{T+273.15}$ s in m/s, T in C

c) Compare the speed of sound right now to when it's - 25 C.

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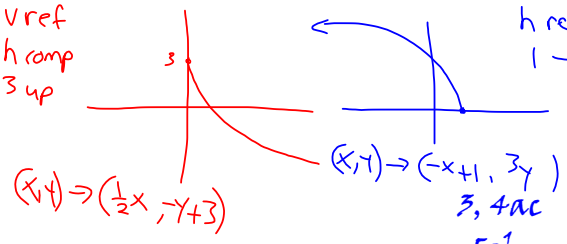
ex2: Sketch a graph and give the mapping.

a) $y = -\sqrt{2x} + 3$ b) $y = 3\sqrt{-(x-1)}$

V ref, h comp, 3 up

V str 3, h ref, 1 →



$(x,y) \to (\frac{1}{2}x, -y+3)$

$(x,y) \to (-x+1, 3y)$

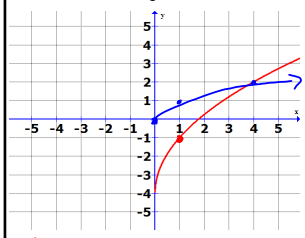
3, 4ac

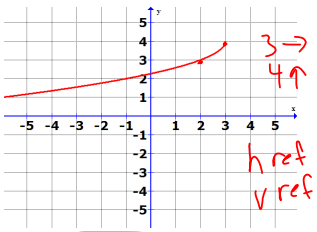
5ab

Radical Functions (2.1) p72 day 1

What are the key points on a radical graph?

ex3: Make the equation of the radical function from the graph.





3→
4↑

h ref
V ref

4↓
V str 3

$y = 3\sqrt{x} - 4$

$y = -\sqrt{-(x-3)} + 4$

10a

Radical Functions (2.1) p72 day 1

HW: p72 #5de, 10a, 12

Quiz Monday

Assignment Tuesday