

MTH 30

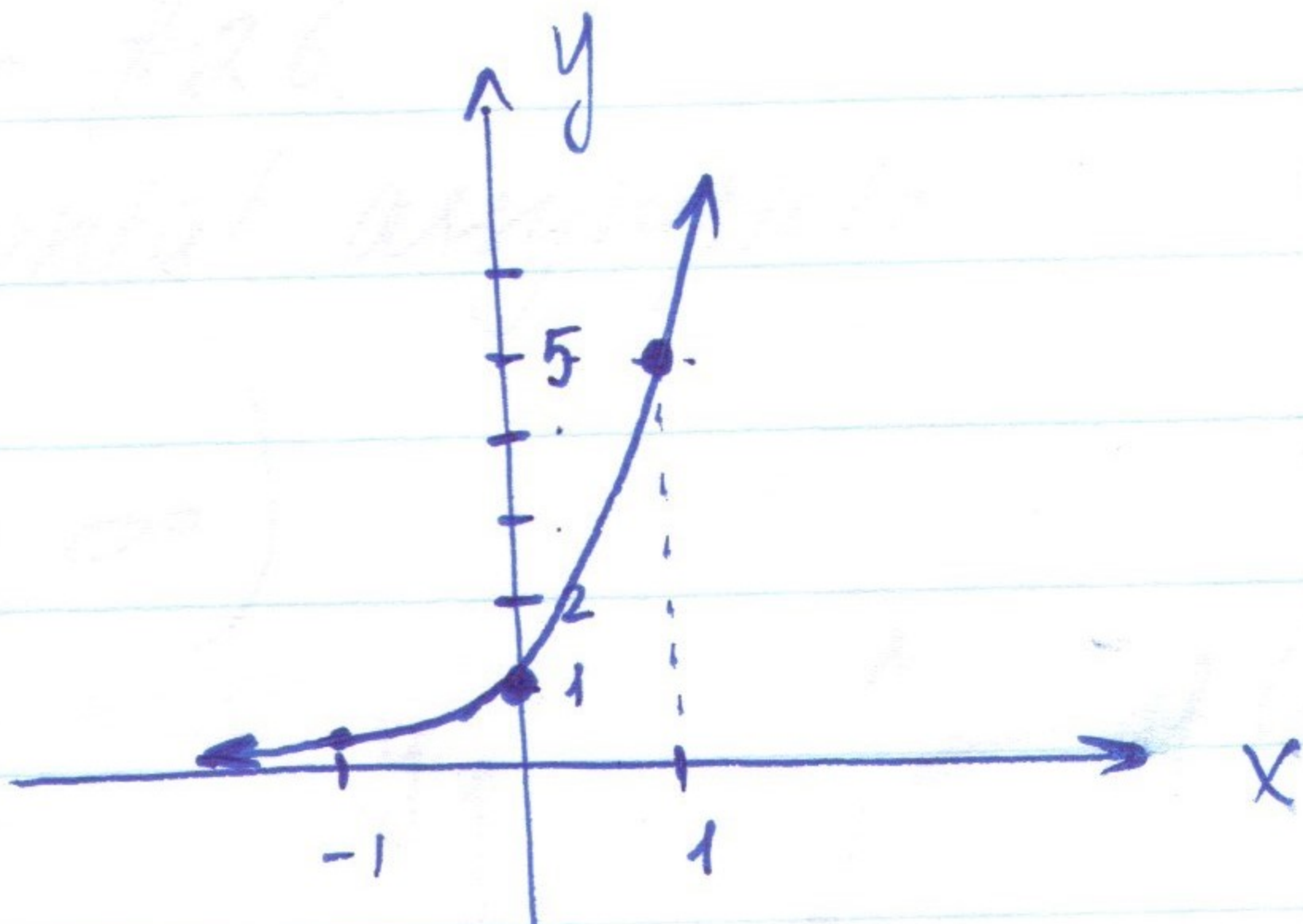
Homework

Section 3.1 / 12, 20, 24, 26, 30, 34.

#12

$f(x) = 5^x$

x	y
1	5
0	1
-1	$1/5 = 0.2$



Answer.

#20

$g(x) = 3^{x-1}$

← Answer

horizontal shift 1 unit to the right.

#24

$G(x) = 3^{-x} = \left(\frac{1}{3}\right)^x$ ← Answer

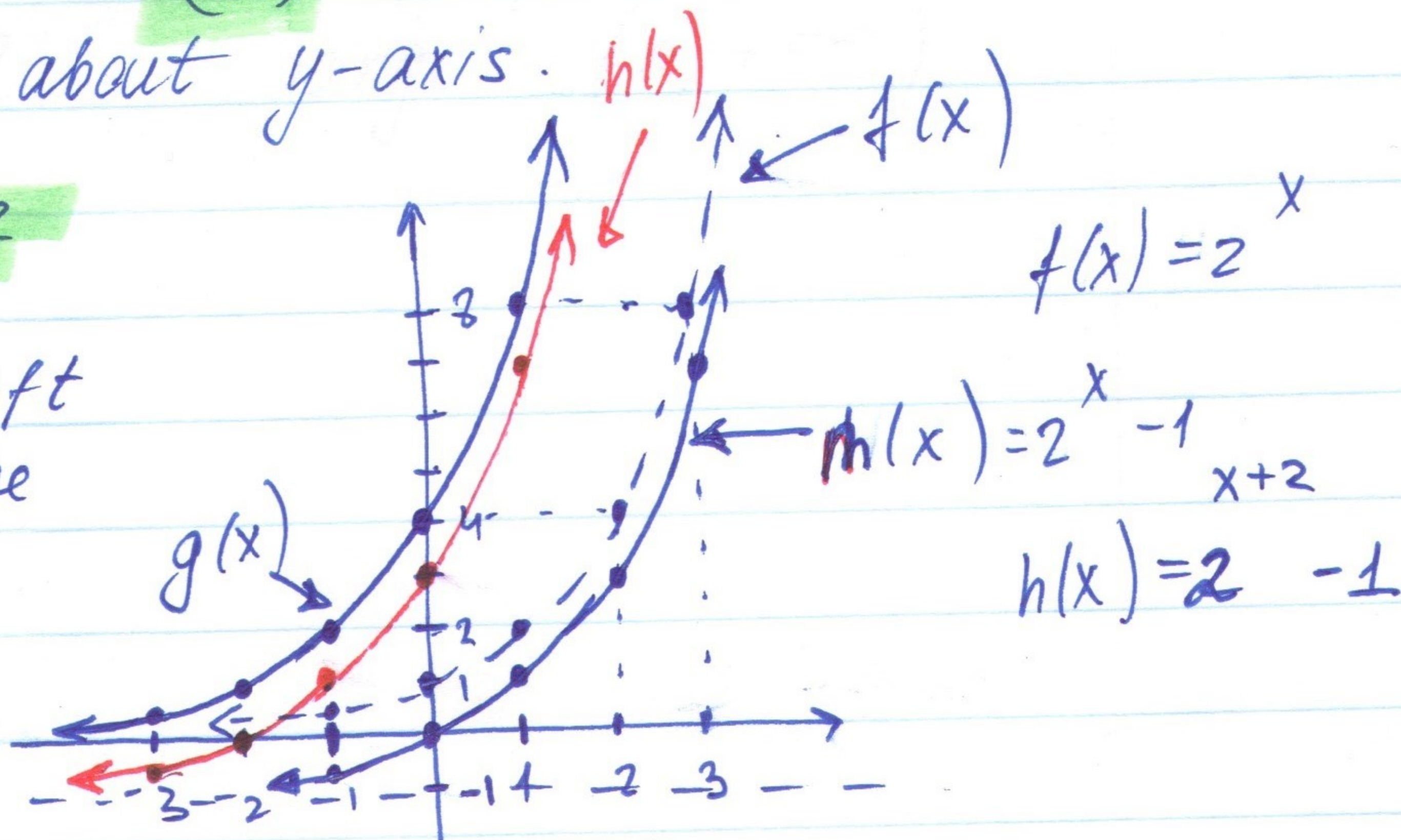
- reflection about y-axis.

$h(x)$ ← $f(x)$

#26

$g(x) = 2^{x+2}$

- horizontal shift 2 units to the left



Answer:

$y=0$ - horizontal asymptote.

domain: \mathbb{R}

range: $(0, +\infty)$

MTR 30

Homework

#30

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

see the graph in #26.

$y = -1$ - horizontal asymptote

domain: \mathbb{R}

range: $(-1, +\infty)$

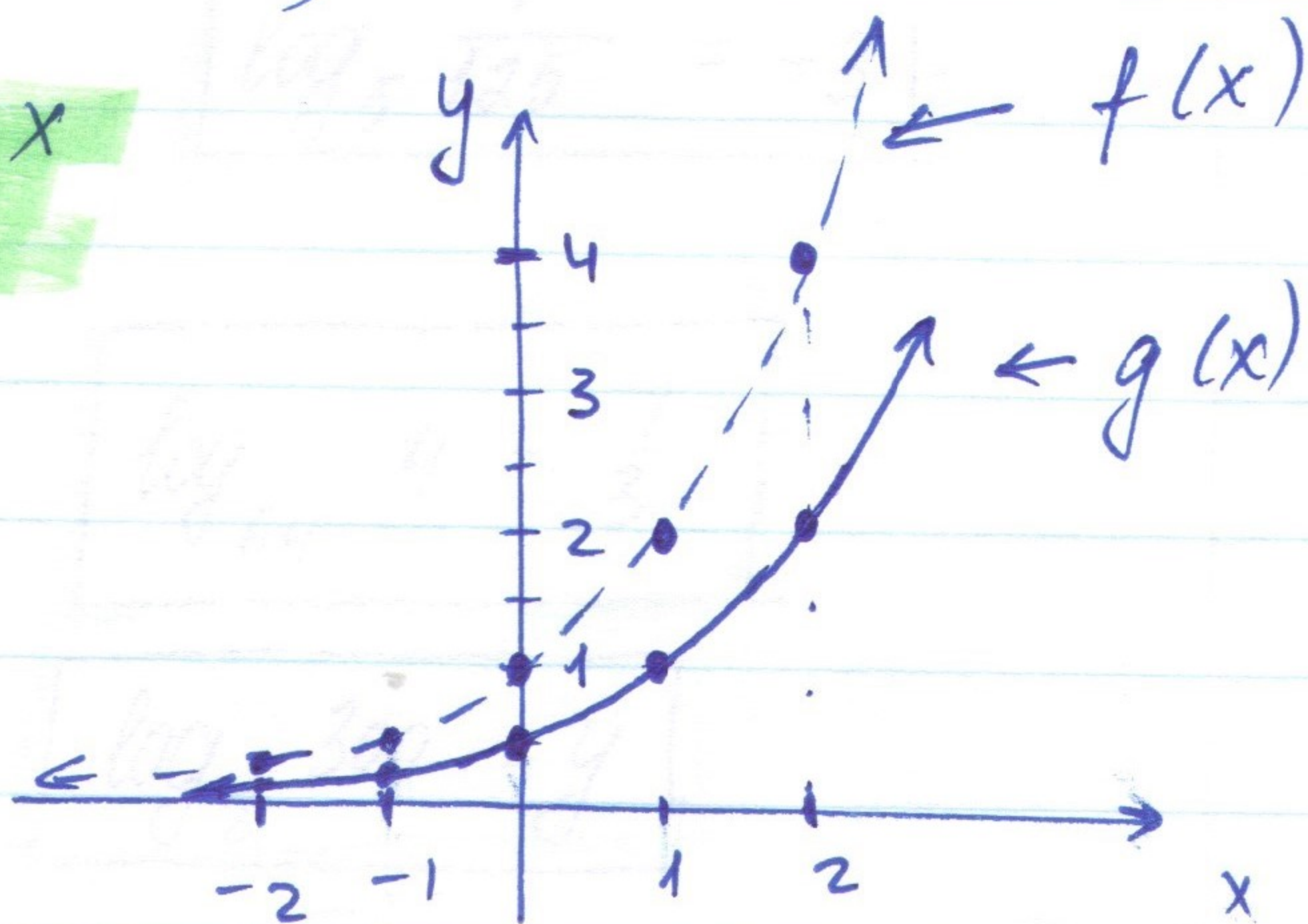
#34

$$g(x) = \frac{1}{2} \cdot 2^x$$

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

vertical shrinking

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



$y = 0$ - horizontal asymptote

domain: \mathbb{R}

range: $(0, +\infty)$