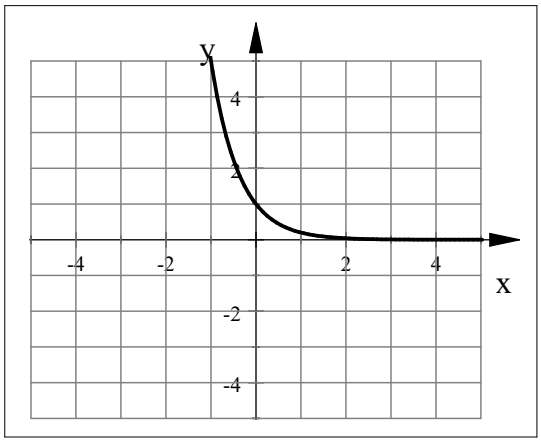
Choose the correct answer in each of the following:

Section 1.4+1.5:

1. The following figure shows the graph of the function $f(x) =$



(**a**) 5^x

(**b**) -5^x

(**c**) $\left(\frac{1}{5}\right)^x$

(**d**) $-\left(\frac{1}{5}\right)^x$

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2. The domain of the function $f(x) = \pi^x - 5$ is

(**a**) $(0, \infty)$

(**b**) $[5, \infty)$

(**c**) $(-\infty, \infty)$

(**d**) $(-\infty, 5)$

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3. The function $f(x) = \frac{x+2}{x}$ is one-to-one function.

(**a**) True

(**b**) False

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4. If the function $f(x) = x^5 + 1$, then $f^{-1}\left(f(x)\right) =$

(**a**) $\frac{-x}{x^5+1}$

(**b**) $\frac{-1}{x^5 - 1}$

(**c**) $\frac{-x^5 + 1}{x}$

(**d**) x

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5. The inverse function of $f(x) = \sqrt{\frac{6x}{2x+1}}$ is

(**a**) $f^{-1}(x) = \frac{x^2}{2x^2 - 6}$

(**b**) $f^{-1}(x) = \frac{1}{6}(1 + x^{-2})$

(**c**) $f^{-1}(x) = \frac{1}{2}(1 + 6x^{-2})$

(**d**) $f^{-1}(x) = \frac{x^2}{6 - 2x^2}$

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6. $\log_4 20 - \log_4 5 =$

(**a**) -4

(**b**) 4

(**c**) 1

(**d**) -1

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7. If $\log_2(x+3) = 3$ then $x =$

(**a**) 5

(**b**) 11

(**c**) 1

(**d**) 8

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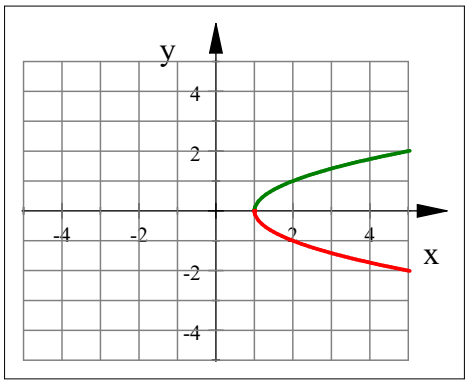
8. The following figure represents a graph of a (function and it's inverse) at the same coordinate axis



(**a**) True

(**b**) False

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answers: **1-c**, **2-c**, **3-a**, **4-d**, **5-d**, **6-c**, **7-a**,**8-b**.