

HOMWORK: DOMAIN AND RANGE



NAME: _____

DAY 3

Find the domain and range.

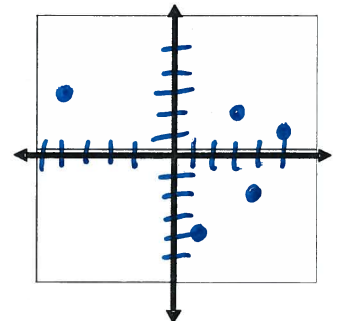
<p>1.</p> <p>Domain: $(-\infty, \infty)$ (Interval) $-\infty < x < \infty$ (Inequality)</p> <p>Range: $(-\infty, -2]$ (Interval) $-\infty < y \leq -2$ (Inequality)</p>	<p>2.</p> <p>Domain: $(-\infty, \infty)$ $-\infty < x < \infty$</p> <p>Range: $(-3, \infty)$ $-3 < y < \infty$</p>	<p>3.</p> <p>Domain: $(-\infty, 2) \cup (2, \infty)$ $\mathbb{R}, x \neq 2$</p> <p>Range: $(-\infty, \infty)$ $-\infty < y < \infty$</p>
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4) Consider the relation $\{(4, -2), (-4, 3), (1, -4), (3, 2), (5, 1)\}$

a) State the domain and range of the relation.

D: $\{4, -4, 1, 3, 5\}$ R: $\{-2, 3, -4, 2, 1\}$

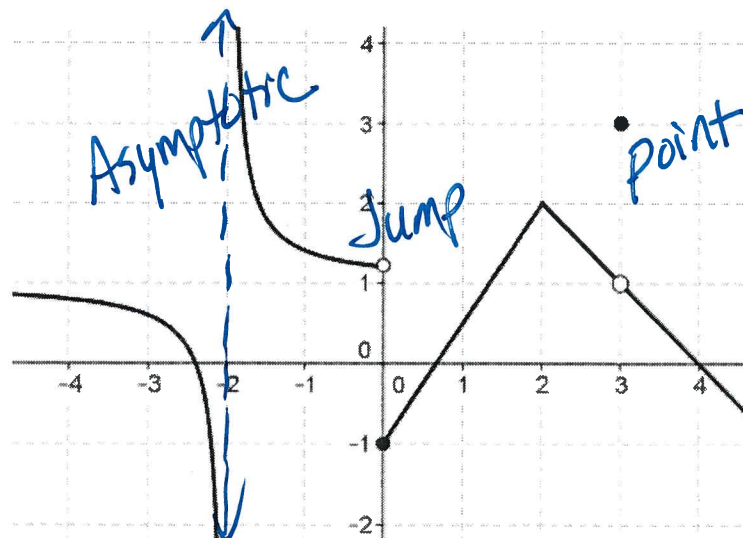
b) Create a mapping diagram **and** then a graph for the relation.



c) Is the relation a function? Why or why not?

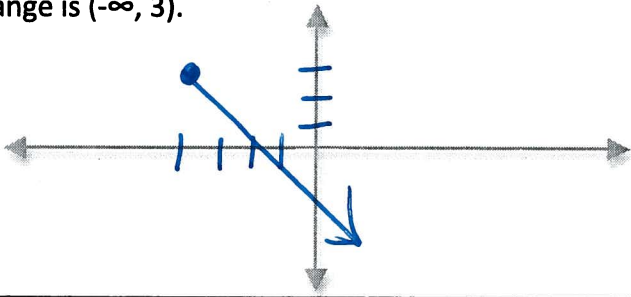
Yes. Passes the vertical line test!

5. Label the graph with each specific type of discontinuity.

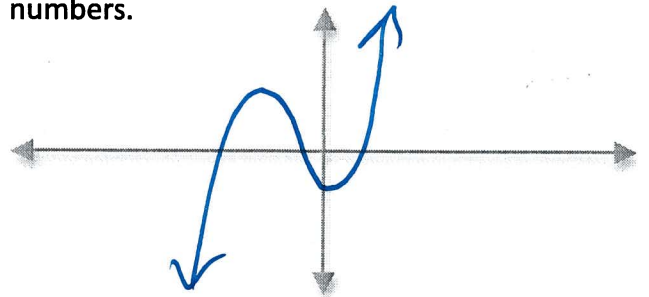


Draw a function that fulfills the following characteristics. CHOOSE 6 questions to complete.

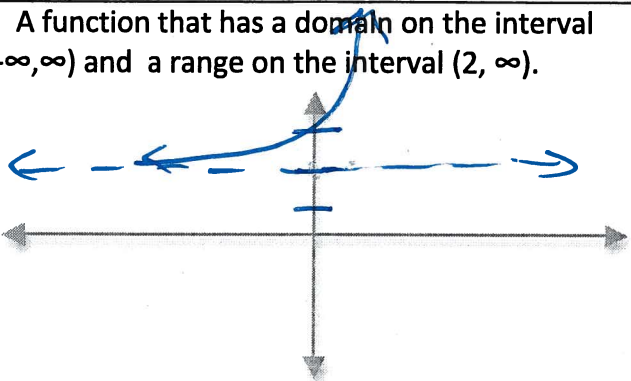
6. A function whose domain is $(-4, \infty)$ and whose range is $(-\infty, 3)$.



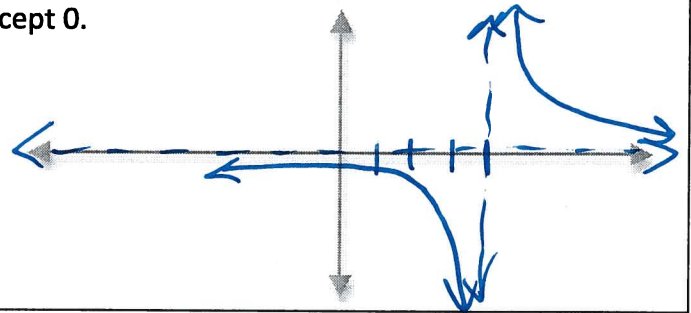
7. A function whose domain and range are both all real numbers.



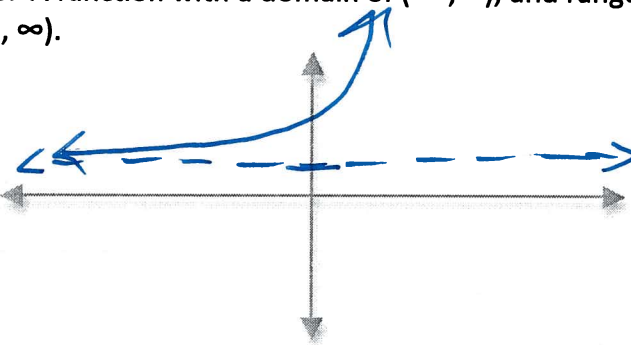
8. A function that has a domain on the interval $(-\infty, \infty)$ and a range on the interval $(2, \infty)$.



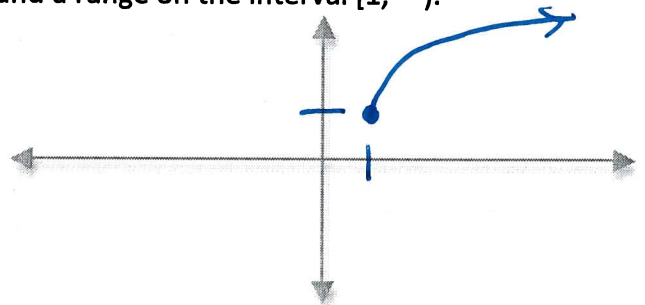
9. A function that has a domain that is all real numbers except 4 and a range of all real numbers except 0.



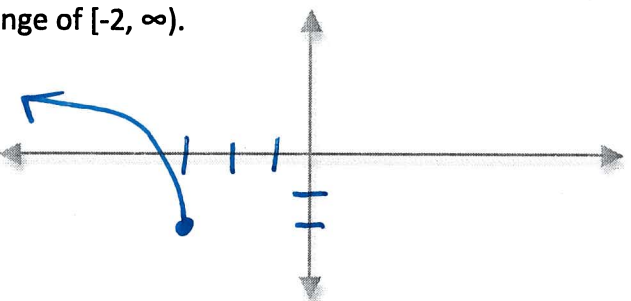
10. A function with a domain of $(-\infty, \infty)$, and range of $(1, \infty)$.



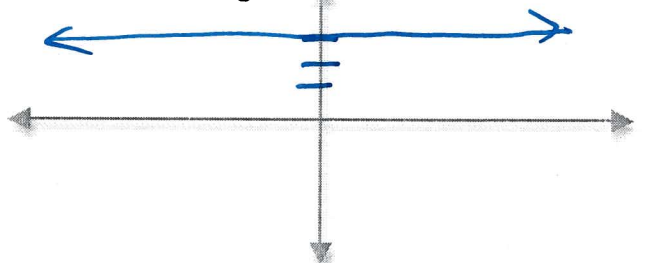
11. A function that has a domain on the interval $[1, \infty)$ and a range on the interval $[1, \infty)$.



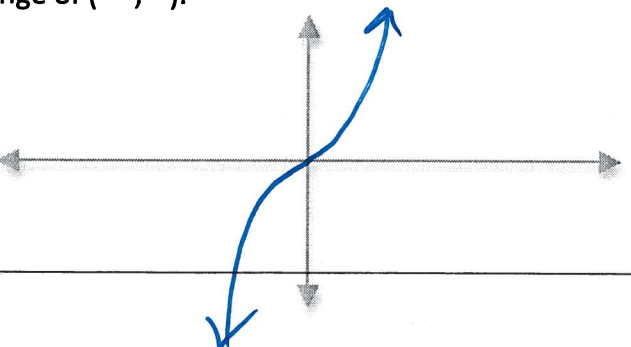
12. A function that has a domain of $(-\infty, -3]$ and range of $[-2, \infty)$.



13. A function that has a domain that is all real numbers and whose range is 3.



14. A function that has a domain of $(-\infty, \infty)$, and a range of $(-\infty, \infty)$.



15. A function has a domain that is all real numbers except 2 and a range of all real numbers.

