

Name: _____

Date: _____

Different rules on different intervals. Pick the piece whose interval holds your x , then plug in. Last two are challenge problems!

- 1.** $f(x) = x + 1$ if $x < 2$; $f(x) = 5$ if $x \geq 2$. Find $f(0)$.

show your work

- 2.** Same f : find $f(2)$.

show your work

- 3.** Same f : find $f(4)$.

show your work

- 4.** $g(x) = 2x$ if $x \leq 3$; $g(x) = x + 3$ if $x > 3$. Find $g(3)$.

show your work

5. Same g : find $g(5)$.

show your work

6. A tutor charges \$20/hr for the first 2 hours, \$15/hr after. Cost for 1 hour?

show your work

7. Same tutor: cost for 3 hours?

show your work

8. Why must each x get exactly one piece?

show your work

9. $f(x) = -x$ if $x < 0$; $f(x) = x^2$ if $x \geq 0$. ★ CHALLENGE
Find $f(-4)$ and $f(3)$.

show your work

10. A pay scale: \$12/hr up to 40 hrs, then 1.5x that (overtime) beyond 40. Weekly pay for 45 hours? ★ CHALLENGE

show your work