

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

$0 < 2$, use $x + 1$

Answer: 1

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

$2 \geq 2$, use 5

Answer: 5

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

$4 \geq 2$, use 5

Answer: 5

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

$3 \leq 3$, use $2x$

Answer: 6

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

$5 > 3$, use $x + 3$

Answer: 8

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

Within first 2

Answer: \$20

7. Same tutor: cost for 3 hours?

$2 \times 20 + 1 \times 15$

Answer: \$55

8. Why must each x get exactly one piece?

Else not a function

Answer: so it stays a function

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

$-(-4) = 4$; $3^2 = 9$

Answer: $f(-4) = 4$; $f(3) = 9$

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

$40 \times 12 = 480$

$5 \times 18 = 90$

Answer: \$570