

1. Solve and graph the solution set of the following inequality. Express the solution set using interval notation.

$$-\frac{5x}{10} + 1 \geq \frac{1}{5} - \frac{x}{10}$$

$$\frac{\cancel{10}}{1} \cdot \left(\frac{-5x}{\cancel{10}} \right) + 10 \cdot 1 \geq \frac{\cancel{10}}{1} \cdot \frac{1}{\cancel{5}} - \frac{\cancel{10}}{1} \cdot \frac{x}{\cancel{10}}$$

$$-5x + 10 \geq 2 - x$$

$$-4x \geq -8$$

$$x \leq 2$$

$$\boxed{(-\infty, 2]}$$



2. Solve $3(x - 2) + x \leq 4(x - 1)$. Express the solution set using interval notation.

$$3x - 6 + x \leq 4x - 4$$

$$4x - 6 \leq 4x - 4$$

$$-6 \leq -4 \neq \text{True!}$$

$$\boxed{(-\infty, \infty)}$$

3. Solve $5x < 5(x - 3)$.

$$5x < 5x - 15$$

$$0 < -15 \leftarrow \text{False!}$$

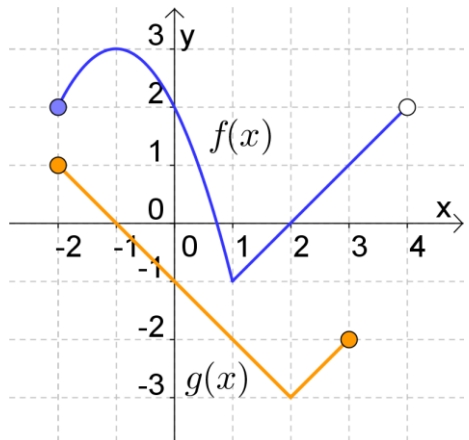
$$\boxed{\emptyset}$$

4. (Review) Solve $A = P + Prt$ for P .

$$A = P(1 + rt)$$

$$\boxed{\frac{A}{1 + rt} = P}$$

5. (Review) Use the following graph to answer the following questions.



a) Find $f(1)$.

$$f(1) = \boxed{-1}$$

b) Find $g(1)$.

$$g(1) = \boxed{-2}$$

c) Find $\left(\frac{f}{g}\right)(1)$.

$$\left(\frac{f}{g}\right)(1) = \frac{f(1)}{g(1)} = \frac{-1}{-2} = \boxed{\frac{1}{2}}$$

d) Find $(fg)(0)$.

$$(fg)(0) = f(0)g(0) = (2)(-1) = \boxed{-2}$$

6. (Review) Simplify: $\left(\frac{-15a^4b^2}{5a^{10}b^{-3}}\right)^3$

$$= (-3a^{-6}b^5)^3 = -27a^{-18}b^{15} = \boxed{\frac{-27b^{15}}{a^{18}}}$$

Q: What has teeth but can't bite?