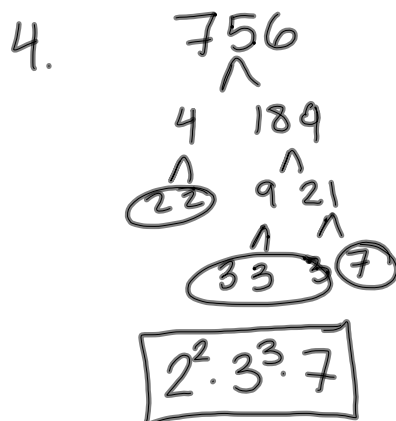
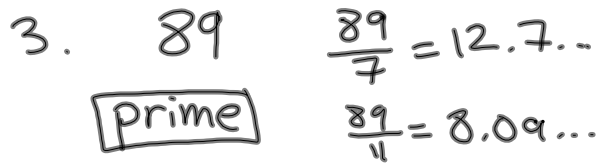
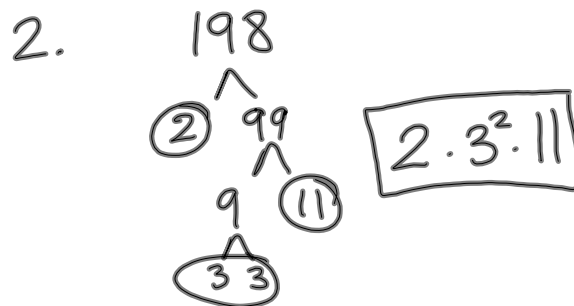
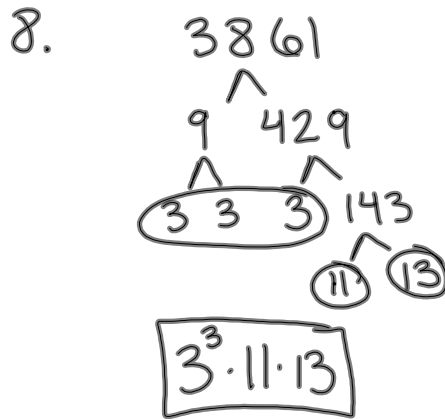
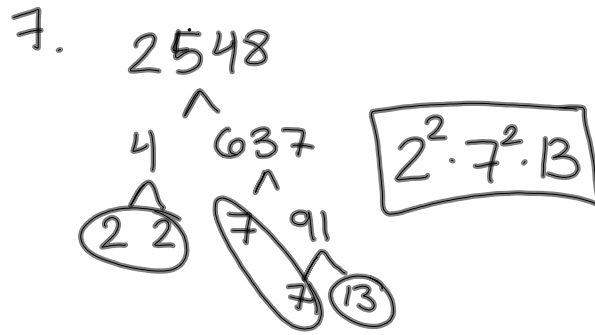


p.181 # 1-8



# HW Assessment

2. 198 find prime factorization

$$\begin{array}{r}
 \phantom{6x = } -4y \\
 3. \quad 6x = 4y + 5 \\
 \phantom{6x = } 6y = 9x - 5 \\
 \phantom{6x = } -9x
 \end{array}$$

$$\begin{array}{r}
 (6x - 4y = 5) \cdot 3 \\
 (-9x + 6y = -5) \cdot 2
 \end{array}$$

$$\begin{array}{r}
 18x - 12y = 15 \\
 + \quad -18x + 12y = -10 \\
 \hline
 0 + 0 = +5
 \end{array}$$

No Solution

$$y = 5 \quad 0 = 5$$

$$-9x + 6 \cdot 5 = -5$$

$$-9x + 30 = -5$$

$$-9x = -35$$

$$x = 35/9$$

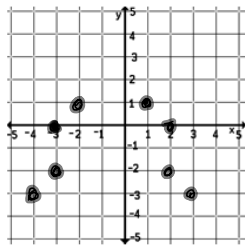
$$\left( \frac{35}{9}, 5 \right)$$

4. Given the function  $f(x) = \frac{4x-3}{x^2+6}$  find  $f(-1)$  and  $f(0)$

$$f(-1) = \frac{4(-1)-3}{(-1)^2+6} = \frac{-4-3}{1+6} = \frac{-7}{7} = \textcircled{-1}$$

$$f(0) = \frac{4 \cdot 0 - 3}{0^2 + 6} = \frac{-3}{6} = \boxed{-\frac{1}{2}}$$

5.



Domain:

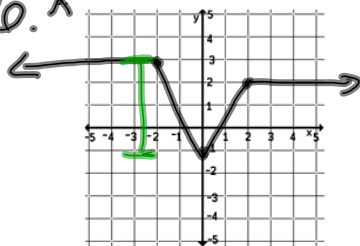
$$x: \{-4, -3, -2, 1, 2, 3\}$$

Range:

$$y: \{-3, -2, 0, 1\}$$

Is it a function? NO

6.



Domain:

$$x: \mathbb{R}$$

Range:

$$-1 \leq y \leq 3$$

Function? YES

7. Find the domain of the function  $f(x) = \frac{x^2 - 7x}{18 + x}$

$$D: x \neq -18$$

8. Find the domain of the function  $g(x) = 2x - 5$

$$D: \mathbb{R}$$

9. Let  $f(x) = x^2 - 1$  and  $g(x) = 1 - 2x$ . Find  $f(g(-1))$  and  $g(3f(2))$ .

$$f(g(-1)) \quad g(-1) = 1 - 2(-1) = 1 + 2 = 3$$

$$f(3) = 3^2 - 1 = 9 - 1 = \boxed{8}$$

$$g(3f(2)) \quad f(2) = 2^2 - 1 = 3$$

$$g(3 \cdot 3) = g(9) = 1 - 2 \cdot 9 = 1 - 18 = \boxed{-17}$$

10. Graph the system of inequalities:  $y \leq 0$   
 $y \geq -3x - 8$   
 $2x + 3y \leq -2$

