

$$f(x) = 5x^2 \quad g(x) = 2x - 1$$

① $(f-g)(x) = ?$

② $f(g(x)) = ?$

③ WHAT IS THE NAME OF THE FUNCTION OPERATION IN #②?

ACT
1 min
Barron's

For all y ,
 $(y-2)(y-4) = ?$

• Homework review Pg. 18 #15, 16, 23. → SEE NEXT page

• IGW $\Rightarrow$ Worksheet... do in class.
finish in class!

Homework review: Pg 18 # 15-16, 23

⑮ $f(x) = x^2 - 9$ $g(x) = x + 4$

$$\left. \begin{aligned} f(g(x)) &= \\ &= (x+4)^2 - 9 \\ &= \overbrace{(x+4)(x+4)} - 9 \end{aligned} \right\} \begin{aligned} g(f(x)) &= (x^2 - 9) + 4 \\ &= x^2 - 9 + 4 \\ &= \boxed{x^2 - 5} \end{aligned}$$

$$x^2 + 4x + 4x + 16 - 9$$

$$\boxed{x^2 + 8x + 7}$$

⑯ $f(x) = \frac{1}{2}x - 7$

$$g(x) = x + 6$$

$$\left. \begin{aligned} f(g(x)) &= \frac{1}{2}(x+6) - 7 \\ &= \frac{1}{2}x + 3 - 7 \\ &= \boxed{\frac{1}{2}x - 4} \end{aligned} \right\} \begin{aligned} g(f(x)) &= (\frac{1}{2}x - 7) + 6 \\ &= \frac{1}{2}x - 7 + 6 \\ &= \boxed{\frac{1}{2}x - 1} \end{aligned}$$

⑰ Domain of $(f \circ g)(x)$

$$f(x) = \frac{1}{x}$$

$$g(x) = 7 - x$$

$$f(g(x)) = \frac{1}{(7-x)}$$

$$\therefore \boxed{\text{domain} = \{x \mid x \neq 7\}}$$