$$
\begin{aligned}
& \text { 10.28-13 } \\
& 3^{\prime 4} \text { Trig } \\
& \text { RQ } 9 \\
& \text { (4) }-12 \pm 8 \\
& \text { (5) } \frac{3}{6}=\frac{1}{2} \\
& \text { (8) }(x+5)(x-4) \\
& g(x)=x^{2} \quad h(x)=x-2 \\
& g(h(x))=g(x-2) \\
& =(x-2)^{2} \rightarrow(x-2)(x-2) \\
& x^{2}-4 x+4 \\
& h(h(h(4))) \\
& h(h(2)) \\
& \begin{array}{l}
\stackrel{\downarrow}{0}(0)=0-2 \\
d(x)=3 x-1
\end{array} \\
& d(d(d(x))) \\
& d(d(3 x-1)) \quad 3(3 x-1)-1 \\
& d \\
& 9 x-3-1 \\
& d\left(\begin{array}{c}
9 x-4 \\
\downarrow
\end{array}\right. \\
& 9 x-4 \\
& 3(9 x-4)-1 \\
& 2 \rightarrow x-12-1 \\
& 27 x-13 \\
& g(x)=10 x \\
& g(g(g(x))) \\
& g\left(\frac{g(10 x)}{\downarrow}\right) \quad 10 \cdot 10 x \\
& g(100 x) \\
& =10 \cdot(100 x) \\
& 1000 x
\end{aligned}
$$

Give the domain

$$
f(x)=\frac{6+2 x}{x-10}
$$

$\mathbb{R}$ except $x \neq 10$

$$
\begin{array}{r}
f(x)=\begin{array}{l}
x+4 \\
x+4 \geq 0 \\
\frac{x}{x}: x \geq-4
\end{array}
\end{array}
$$

$$
f(x)=3 x^{2}-9
$$

R

$$
f(x)=\frac{x^{100}}{(x-3)(x+2)}
$$

R except $x \neq 3,2$

Put in interval nutation

$$
\begin{aligned}
& x>8 \quad(8, \infty) \\
& x \leq 9 \quad(-\infty, 9] \\
& -2<x \leq 10 \quad(-2,10]
\end{aligned}
$$



Domain: $R: x>2 \quad(2, \infty)$
Range: $\mathbb{R}: y<4(-\infty, 4)$

$$
\begin{aligned}
& 10-27-13 \\
& 4^{4} T r \therefore y
\end{aligned}
$$

RQ 9
(4) $-12 \pm 8$
(5) $\frac{3}{6}=\frac{1}{2}$

$$
\begin{gathered}
(8+5)(x-4)=0 \\
x=-5 \text { or } 4
\end{gathered}
$$

$$
\begin{aligned}
& f(x)=5 x^{2} \quad g(x)=x+1 \\
& -4+1 \\
& f(\sqrt[g]{g(-4)}) \\
& -3 \\
& f(-3)=5 \cdot(-3)^{2} \\
& 5 \cdot 9=45 \\
& f(f(x))=f\left(5 x^{2}\right) \\
& 5\left(5 x^{2}\right. \\
& \text { 5. } 5 x^{2} \cdot 5 x^{2} \\
& \text { 5. } 25 x^{4} \\
& 125 x^{4} \\
& g(n)=2 n+5 \\
& g(g(g(n)))=\frac{g(g(2 n+5))}{\left.\frac{\downarrow}{2(2 n+5)+5}\right)} \\
& 4 n+10+5 \\
& (4 n+15) \\
& g(4 n+15) \\
& 2(4 n+15)+5 \\
& 8 n+30+5 \\
& 8 n+35
\end{aligned}
$$

Interval Nutation
(1) $n \geq 8 \quad[8, \infty)$
(2) $1 \leq x<10 \quad[1,10)$
(3) $x<-4 \quad(-\infty,-4)$

Give Domain of the following

$$
\text { (1) } f(x)=\frac{8+x^{4}}{x-1}
$$

D: $\mathbb{R}$ except $x \neq 1$
(2) $f(x)=x^{2}-25$

Domain: $\mathbb{R}$
(3)

$$
\begin{array}{r}
f(x)=\sqrt{x-10} \\
\begin{array}{r}
x-10 \geq 0 \\
+10+10 \\
Q: \quad x \geq 10
\end{array}
\end{array}
$$



Domain: - $3<x \leq 3$
Range: $1<y \leq 4$


Domain: R: $x>2$
Range: $\mathbb{R}: y<6$


Domain: $\mathbb{R}$
Rance: 飛: $y \geq 1$

