

12-14-17 1st Try

$$\textcircled{9} (3n^2y^4)^2 + n(n^4)y^3y^5$$

$$3n^2y^4 \cdot 3n^2y^4 + n(nnnn)y^3y^5$$
$$9n^4y^8 + n^5y^8$$

—
0
↑
problem

√ —
↑
problem

—
≠ 0

√
↑
≥ 0

$$\textcircled{24} \text{ Domain of } f(x) = x^2 - 9$$

\mathbb{R}

$$\textcircled{23} \text{ Domain of } f(x) = \frac{x^3}{x-3} ?$$

$$\begin{array}{r} x-3 \neq 0 \\ +3 \quad +3 \\ \hline x \neq 3 \end{array}$$

$$\textcircled{22} \text{ Domain of } f(x) = \sqrt{x-3}$$

$$\begin{array}{r} x-3 \geq 0 \\ +3 \quad +3 \\ \hline x \geq 3 \end{array}$$

③① Eq of line $(1,4)$ $(3,10)$

$$y - y_1 = m(x - x_1) \quad m = \frac{10-4}{3-1}$$

$$y - 4 = 3(x - 1) \quad = \frac{6}{2}$$

$$\frac{y-4}{+4} = \frac{3x-3}{+4} \quad = 3$$

$$y = 3x + 1$$

⑦⑥ \perp to $y = -4x - 5$ $(-8, 2)$

$$y - y_1 = m(x - x_1) \quad m = -\frac{4}{1}$$

$$y - 2 = \frac{1}{4}(x + 8) \quad \therefore \perp m = \frac{1}{4}$$

$$\frac{y-2}{+2} = \frac{\frac{1}{4}x + 2}{+2}$$

$$y = \frac{1}{4}x + 4$$

$$-\frac{1}{4}x \quad -\frac{1}{4}x$$

$$-4 \left[-\frac{1}{4}x + y = 4 \right]$$

$$x - 4y = -16$$

12-14-17 3rd Trig

$$\textcircled{9} (3n^2y^4)^2 + n(n^4)y^3y^5$$

$$3n^2y^4 \cdot 3n^2y^4 + nnnn yyy$$
$$9n^4y^8 + n^5y^8 \quad \text{YYYYY}$$

$$\textcircled{3} (x+2)(x+2)(x+2)$$

↓

$$x^2 + 2x + 2x + 4$$

$$(x+2) \cdot (x^2 + 4x + 4)$$

$$x^3 + 4x^2 + 4x + 2x^2 + 8x + 8$$

$$x^3 + 6x^2 + 12x + 8$$

$$\textcircled{68} \text{ Solve } x^3 + 6x^2 + 5x = 0$$

$$x(x^2 + 6x + 5) = 0$$

$$x(x+5)(x+1) = 0$$

$$a \cdot b \cdot c = 0$$

$$a=0 \quad b=0 \quad c=0$$

$$x=0$$

$$x+5=0$$

$$x+1=0$$

$$x=-5$$

$$x=-1$$

Domain

$$\begin{array}{c} \text{---} \\ \uparrow \\ \neq 0 \end{array} \quad \begin{array}{c} \sqrt{\quad} \\ \uparrow \\ \geq 0 \end{array}$$

②④ Domain $f(x) = x^2 - 9$
 \mathbb{R}

②③ Domain $f(x) = \frac{x^3}{x-3} \neq 0$
 $x-3 \neq 0$
 $x \neq 3$

②② Domain $f(x) = \sqrt{x-3}$
$$\begin{array}{r} x-3 \geq 0 \\ +3 \quad +3 \\ \hline x \geq 3 \end{array}$$

③① $m=4$ (2,5)

$$y - y_1 = m(x - x_1)$$

$$y - 5 = 4(x - 2)$$

$$\begin{array}{r} y - 5 = 4x - 8 \\ +5 \quad +5 \end{array}$$

$$\hline y = 4x - 3$$

$$\textcircled{76} \perp y = -4x - 5 \quad (-8, 2)$$

$$m = -4 \quad \therefore \perp m = \frac{1}{4}$$

$$y - 2 = \frac{1}{4}(x + 8)$$

$$\begin{array}{r} y - 2 = \frac{1}{4}x + 2 \\ + 2 \qquad \qquad + 2 \\ \hline \end{array}$$

$$y = \frac{1}{4}x + 4$$

$$-\frac{1}{4}x - \frac{1}{4}x$$

$$-4 \left[-\frac{1}{4}x + y = 4 \right]$$

$$x - 4y = -16$$

$$\textcircled{40} \begin{cases} 2x + 3y = 8 \xrightarrow{m \cdot 2} -4x - 6y = -16 \\ 4x + 2y = 12 \Rightarrow 4x + 2y = 12 \\ \hline -4y = -4 \\ y = 1 \end{cases}$$

12-14-17 4th Trig

Domain



②④ Domain $f(x) = x^2 - 9$
 \mathbb{R}

②③ Domain $f(x) = \frac{x^3}{x-3}$
 $x-3 \neq 0$
 $x \neq 3$

②⑧ Domain $f(x) = \sqrt{x-3} \geq 0$
 $\begin{array}{r} x-3 \geq 0 \\ +3 \quad +3 \\ \hline x \geq 3 \end{array}$

③③ \perp to $y = -2x + 4$ (4,1)
 $y - y_1 = m(x - x_1)$ $m = -2$
 $y - 1 = \frac{1}{2}(x - 4)$ $\perp m = \frac{1}{2}$
 $y - 1 = \frac{1}{2}x - 2$
 $\begin{array}{r} y - 1 = \frac{1}{2}x - 2 \\ +1 \quad \quad +1 \\ \hline y = \frac{1}{2}x - 1 \end{array}$

$$\textcircled{3} \quad (x+2) \boxed{(x+2)(x+2)}$$

$$x^2 + 2x + 2x + 4$$

$$(x+2) \overbrace{(x^2 + 4x + 4)}$$

$$x^3 + 4x^2 + 4x + 2x^2 + 8x + 8$$

$$x^3 + 6x^2 + 12x + 8$$

$$\textcircled{68} \quad x^3 + 6x^2 + 5x = 0$$

$$x(x^2 + 6x + 5) = 0$$

$$x(x+5)(x+1) = 0$$

$$a \cdot b \cdot c = 0$$

$$a=0 \text{ or } b=0 \text{ or } c=0$$

$$x=0 \text{ or } x+5=0 \text{ or } x+1=0$$

$$x=0$$

$$x=-5$$

$$x=-1$$