

11-12-13
3rd Trig

From 73 questions

$$\begin{aligned} \textcircled{6} & (x+2)(x+2)(x+2) \\ & (x+2)(x^2+4x+4) \\ & x^3 + 4x^2 + 4x + 2x^2 + 8x + 8 \\ & x^3 + 6x^2 + 12x + 8 \end{aligned}$$

$$\textcircled{50} f(x) = \frac{x^3 + 4x - 1}{\sqrt{x} \geq 0}$$

$x \geq 0$
Since it is in
bottom of fraction
can it be 0?
 $\therefore x > 0$

$$\begin{aligned} \textcircled{16} & \frac{4 \pm \sqrt{-40}}{2} \\ & \downarrow \\ & \frac{4 \pm 2i\sqrt{10}}{2} \\ & \neq \\ & 2 \pm i\sqrt{10} \end{aligned} \quad \begin{aligned} & \sqrt{-40} \\ & 2i \sqrt{10} \cdot 2 \cdot 2 \cdot 2 \cdot 5 \\ & 2i\sqrt{10} \end{aligned}$$

$$\begin{aligned} \textcircled{20} & (x+1)(x-1)(x+2)(x-2) \\ & (x^2-1)(x^2-4) \\ & x^4 - 4x^2 - x^2 + 4 \\ & x^4 - 5x^2 + 4 \end{aligned}$$

$$\begin{aligned} \textcircled{29} & n-2 \sqrt{n^2 + 3n - 1} \\ & \begin{array}{r} n+5 + \frac{9}{n-2} \\ - n^2 - 2n \quad \downarrow \\ \hline 5n - 1 \\ - 5n - 10 \\ \hline +9 \end{array} \end{aligned}$$

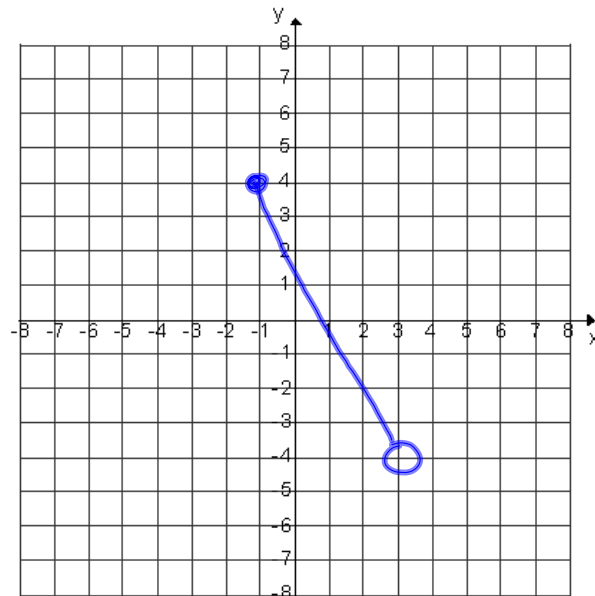
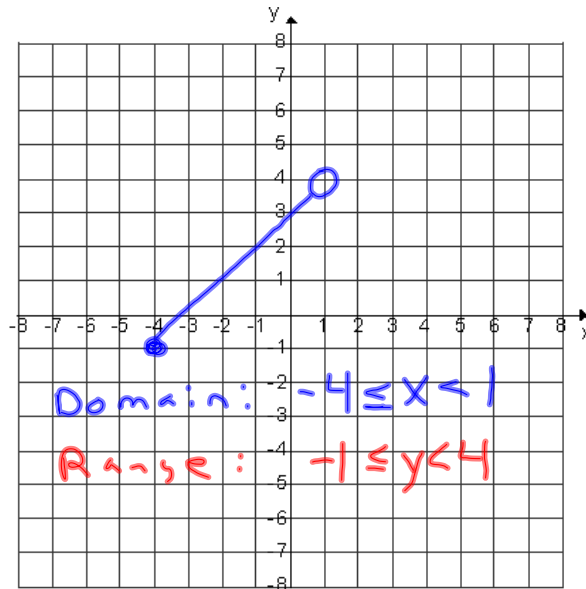
$$\begin{array}{r}
 \textcircled{66} \quad n-5 \sqrt{n^2+20} \\
 \quad \quad \quad n+5 + \frac{45}{n-5} \\
 \hline
 n-5 \sqrt{n^2+0n+20} \\
 - n^2-5n \\
 \hline
 \quad \quad 5n+20 \\
 \quad \quad - 5n-25 \\
 \hline
 \quad \quad \quad 45
 \end{array}$$

$$\textcircled{73} \quad f(x) = \sqrt{10-x}$$

$$\begin{array}{r}
 10-x \geq 0 \\
 -10 \quad -10 \\
 \hline
 -1x \geq -10 \\
 \frac{-1x}{-1} \geq \frac{-10}{-1} \\
 x \leq 10
 \end{array}$$

$$\begin{array}{r}
 \textcircled{65} \quad n-5 \sqrt{n^2+n-1} \\
 \quad \quad \quad n+6 + \frac{21}{n-5} \\
 \hline
 - n^2-5n \\
 \hline
 \quad \quad 6n-1 \\
 \quad \quad - 6n-30 \\
 \hline
 \quad \quad \quad +29
 \end{array}$$

$$\begin{array}{r}
 \textcircled{22} \quad (3n^2y^4)^2 + n(n^4)y^3y^5 \\
 \quad \quad \quad \begin{array}{r} 3^2y^4 \cdot 3^2y^4 \\ n^2y^4 \cdot n^2y^4 \end{array} \\
 \quad \quad \quad 9n^4y^8 + n^5y^8
 \end{array}$$



(40) $(n^3 + 2n) + (n^2 - 2)$
 $n(n^2 + 2) + -1(n^2 + 2)$
 $(n^2 + 2)(n - 1)$

11-12-13

4th Trig

Questions from 2nd 6-week RA

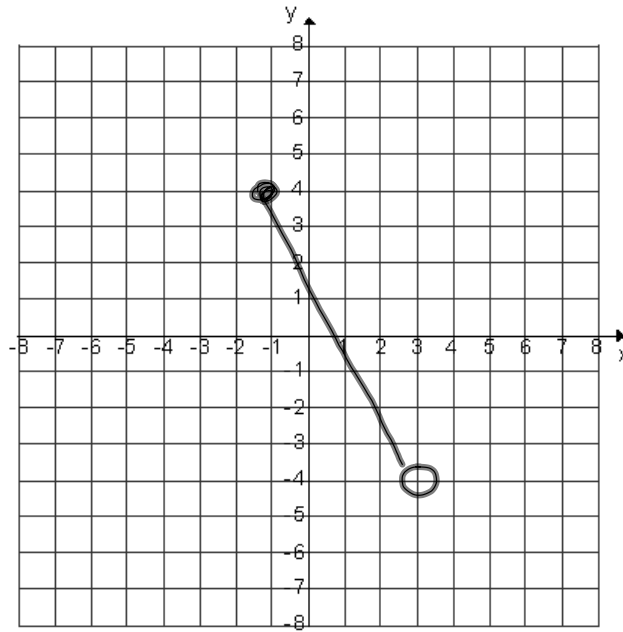
$$\textcircled{31} \left(\frac{n^2 y^{-2}}{a^{-4}} \right)^2$$

$$\left(\frac{n^2 a^4}{y^2} \right)^2$$

$$\frac{n^2 a^4}{y^2} \cdot \frac{n^2 a^4}{y^2} = \frac{nn aaaa}{yy} \cdot \frac{nn aaaa}{yy}$$
$$= \frac{n^4 a^8}{y^4}$$

$$\textcircled{64} \quad n+2 \overline{) n^2 + 5n + 2}$$
$$\begin{array}{r} n+3 + \frac{-4}{n+2} \\ - (n^2 + 3n) \\ \hline 3n + 2 \\ - (3n + 6) \\ \hline -4 \end{array}$$

$$\textcircled{66} \quad n-5 \overline{) n^2 + 20}$$
$$\begin{array}{r} n+5 + \frac{45}{n-5} \\ - (n^2 - 5n) \\ \hline 5n + 20 \\ - (5n - 25) \\ \hline 45 \end{array}$$



(55) Domain: $-1 \leq x < 3$

(56) Range: $-4 < y \leq 4$

(58) Solve $x^3 + 6x^2 + 5x = 0$

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

↓

$$x(x+1)(x+5)$$

$$x=0 \quad x=-1 \quad x=-5$$

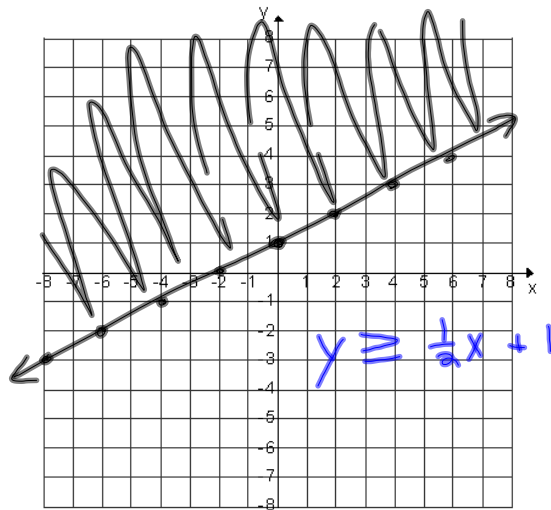
$\frac{5}{1,5}$

(50) $f(x) = \frac{x^3 + 4x - 1}{\sqrt{x}}$

$$x \geq 0$$

$$x \neq 0$$

$$x > 0$$



$$\textcircled{27} \quad \frac{n^2 + 9n - 10}{n^2 - 3n - 4}$$

$$\frac{(n+10)(n-1)}{(n-4)(n+1)}$$

$\frac{-1, 10}{2, 5}$
 $\frac{4}{+1, -4}$
 $2, 2$

$$\textcircled{63} \quad 5a^2 + 10a^3$$

$$5a^2(1 + 2a)$$

$$x < 2 \quad (-\infty, 2)$$

$$2 < x \leq 5 \quad (2, 5]$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2c}$$