22 Simplify $(3n^2y^4)^2 + n(n^4)y^3y^5$

$3n^2y^4 \cdot 3n^2y^4 + n^5y^8$

$9n^4y^8 + n^5y^8$

32 $\left(-2a^{-3}\right)^{-2}$

$\left(\frac{-2}{a^3}\right)^{-1\cdot 2} = \left(\frac{a^3}{-2}\right)^2$

$\frac{a^3}{-2} \cdot \frac{a^3}{-2} = \frac{a^6}{4}$

29 $n-2 \overline{)\, n^2+3n+1}$

$n + 5 + \frac{11}{n-2}$

$-(n^2-2n)$

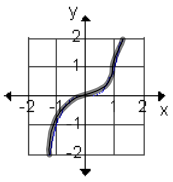
$5n+1$

$-(5n-10)$

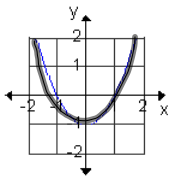
11

Which graph below is not a function?

43

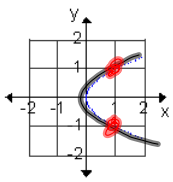


A.



B.

Vertical line test



C.

(34) $(a^{-3}b^{-2})^2$

$\left(\frac{1}{a^3b^2}\right)^2 = \frac{1}{a^3b^2}\cdot\frac{1}{a^3b^2} = \frac{1}{a^6b^4}$

(50) What is the domain of f(x) = $\frac{x^3+4x-1}{\sqrt{x}}$?

fraction

square root

$\sqrt{x}$ $x \geq 0$

but since $\sqrt{x}$ is in denominator $x \neq 0$

$x > 0$

(54) slope (n, 6) (n+2, 7)

$\text{slope} = \frac{\Delta y}{\Delta x} = \frac{7-6}{n+2-n} = \frac{1}{2}$

(14) $\sqrt{120} = \sqrt{2 \cdot 2 \cdot 2 \cdot 3 \cdot 5}$

$2\sqrt{30}$

120
12 10
4 3 2 5
2 2

(20) $[(x-1)(x+1)][(x+3)(x-3)]$

$(x^2-1)(x^2-9)$

$x^4 - 10x^2 + 9$

(18) $\frac{9 \pm \sqrt{18}}{3}$ $\quad 2 \cdot 3 \cdot 3$

$\frac{3}{9} \pm \frac{1}{3}\sqrt{2}$ over $\frac{3}{1}$ $= 3 \pm \sqrt{2}$

(13) $2x^2 + 19x + 9 = 0$

$(2x+1)(x+9) = 0$ $\quad 1,9$ $\quad 3,3$

$2x+1=0$ OR $x+9=0$

$x = -\frac{1}{2}$ or $x = -9$

(29) $n-2 \overline{)\, n^2+3n+1}$ $\quad n+5+\frac{11}{n-2}$

$-(n^2-2n)$

$5n+1$

$-(5n-10)$

11

(26) $\dfrac{n^2-16}{n^2+n-20}$

$\dfrac{(n-4)(n+4)}{(n+5)(n-4)} \cdot \dfrac{n+4}{n+5}$

(47) $f(x) = 3x-10 \quad g(x) = 2x+1$

$f(g(x))$

$f(2x+1) = 3(2x+1) - 10$

$= 6x + 3 - 10$

$= 6x - 7$

(54) $(n, 6) \quad (n+2, 7)$

$\text{slope} = \dfrac{\Delta y}{\Delta x} = \dfrac{7-6}{n+2-n} = \dfrac{1}{2}$

(56) $(n, 3) \quad (n+2, 7)$

$\text{Distance} = \sqrt{\Delta x^2 + \Delta y^2}$

$\Delta x = n - (n+2)$

$n - n - 2$

-2

$\sqrt{4+16}$

$\sqrt{20}$

$\sqrt{2 \cdot 2 \cdot 5}$

$2\sqrt{5}$

(58) inverse of $f(x) = 3x-5$

$y = 3x - 5$

$x = 3y - 5$

$+5 \qquad +5$

$\dfrac{x+5}{3} = \dfrac{3y}{3}$