

$$\#1 \quad \frac{4}{x-2} = \frac{x-1}{x-2}$$

$$4 = x-1$$

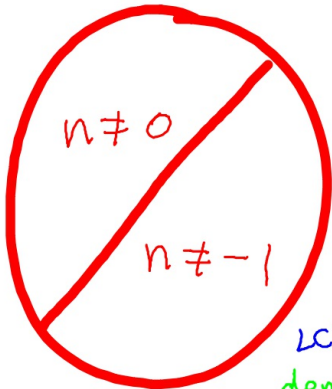
$$5 = x$$

$$\text{check: } \frac{4}{5-2} = \frac{5-1}{5-2}$$

$$\frac{4}{3} = \frac{4}{3} \checkmark$$

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Answer to #2: -1



#3

$$\frac{2}{n} + \frac{n+2}{n+1} = \frac{-2}{n^2+n}$$

$$\frac{2}{n} + \frac{n+2}{n+1} = \frac{-2}{n(n+1)}$$

$$\frac{2 \cdot \frac{n+1}{n+1}}{n} + \frac{n+2 \cdot n}{n+1} = \frac{-2}{n(n+1)}$$

$$2(n+1) + n(n+2) = -2$$

$$2n+2 + n^2+2n = -2$$

$$n^2 + 4n + 4 = 0$$

$$(n+2)^2 = 0$$

$$n = -2$$

check:

$$\frac{2}{-2} + \frac{0}{-1} = \frac{-2}{(-2)^2-2}$$

$$-1 + 0 = \frac{-2}{2}$$

$$-1 = -1 \checkmark$$

LCD: $n(n+1)$
denominators
are the same \rightarrow

Solving rational equations on graphing calculator:

$$\#21 \quad \frac{2}{x-1} + \frac{3}{x+1} = 4$$

⊗ recommended Two Approaches

- ② $Y_1 = 2/(x-1) + 3/(x+1) - 4$
 check zero(s) of Y_1 — where Y_1 crosses x-axis
 x-value(s) of zero(s) are solution
- ① $Y_1 = 2/(x-1) + 3/(x+1)$
 $Y_2 = 4$
 check intersection(s) of Y_1 and Y_2
 x-value of intersection is solution.

$$f(x) = g(x)$$

