ACT Practice!

11. b
12. k
13. a
14. f
15. b
16. k
17. c
18. k
19. b
20. h

More Solving!

① $\left[\frac{1}{x-2} + 2\cdot\frac{x-2}{x-2}\right] = \frac{3x}{x+2}$

$\frac{1}{x-2} + \frac{2(x-2)}{x-2} = \frac{3x}{x+2}$

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

$2x-3 \quad 3x$

$\frac{}{x-2} = \frac{}{x+2}$

② $\frac{18}{x^2-3x} - \frac{6}{x-3} = \frac{5}{x}$ *

$\frac{18}{x(x-3)} - \frac{6}{x-3}\cdot\frac{x}{x} = \frac{5}{x}$

$\frac{18-6x}{x(x-3)} = \frac{5}{x}$

$\frac{18-6x}{x^2-3x} = \frac{5}{x}$

$x(18-6x) = 5(x^2-3x)$

$\frac{}{x-2} = \frac{}{x+2}$

$3x(x-2) = (2x-3)(x+2)$

$3x^2 - 6x = 2x^2 + 4x - 3x - 6$

$-2x^2 \qquad -2x^2 \qquad x$

$x^2 - 7x + 6 = 0$ ✓

$(x-6)(x-1) = 0$

$x-6=0 \qquad x-1=0$

$\boxed{x=6} \qquad \boxed{x=1}$

$x(18-6x) = 5(x^2-3x)$

$18x - 6x^2 = 5x^2 - 15x$

$0 = 11x^2 - 33x$

$0 = 11x(x-3)$

$0 = 11x \qquad 0 = x-3$

$x \neq 0 \qquad x \neq 3$

no real solution

④ $\frac{2}{x-3} - x \cdot \frac{x-3}{x-3} = \frac{x-1}{x-3}$

$\frac{2 - x(x-3)}{x-3} = \frac{x-1}{x-3}$

$\frac{2 - x^2 + 3x}{x-3} = \frac{x-1}{x-3}$

$2 - x^2 + 3x = x - 1$

$-x^2 + 2x + 3 = 0$

$-(x^2 - 2x - 3) = 0$

$-(x-3)(x+1) = 0$

$x = \cancel{3}, \boxed{-1}$

③ $\left[\frac{x+1}{x+6} + 2\frac{x+6}{x+6}\right] = \frac{2x+1}{x+6}$

$\frac{x+1 + 2(x+6)}{x+6} = \frac{2x+1}{x+6}$

$\frac{x+1+2x+12}{x+6} = \frac{2x+1}{x+6}$

$\frac{3x+13}{x+6} = \frac{2x+1}{x+6}$

$3x+13 = 2x+1$

$\boxed{x = -12}$