

Warm Up:

Solve for x: $\frac{13}{x} = (10 - x)$

No more than 4
people per group



$$13 = 10x - x^2$$

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

$$x^2 - 10x + 13 = 0$$

$$x = \frac{10 \pm \sqrt{(-10)^2 - 4(1)(13)}}{2(1)}$$

$$\frac{\sqrt{163}}{4\sqrt{3}}$$

$$x = \frac{10 \pm \sqrt{48}}{2}$$

$$= \frac{10}{2} \pm \frac{4\sqrt{3}}{2} = \boxed{5 \pm 2\sqrt{3}}$$

RATIONAL EQUATIONS



NOTE: everyone will be working on the equation in their own notebook!

- Solve & Check the equation
- Write down notes & procedure for what your group did to solve
- Copy the work & procedure onto the large paper

Be sure your answer checks before the work is handed in!

$$\frac{y}{y-1} = \frac{8}{y} + \frac{1}{y-1}$$

When is cross-multiplying an appropriate method to solve a rational equation?
Homework: p. 69 #17-20

Developing Skills

In 3–20, solve each equation and check.

$$17. 1 = \frac{5}{x+3} + \frac{5}{(x+2)(x+3)}$$

$$18. \frac{a-1}{4} = \frac{8}{a+3}$$

$$19. \frac{4}{y+2} = 1 - \frac{8}{y(y+2)}$$

$$20. \frac{4}{3b-2} - \frac{7}{3b+2} = \frac{1}{9b^2-4}$$