Factor this quadratic: $\frac{3R^2}{3} - \frac{192}{3}$

$3(R^2 - 64)$

$3(R+8)(R-8)$

Find the exact solution to this equation:

$12\left(\frac{5}{6} - \frac{x}{12} + \frac{7x}{3}\right) = (15)12$

$10 - x + 28x = 180$

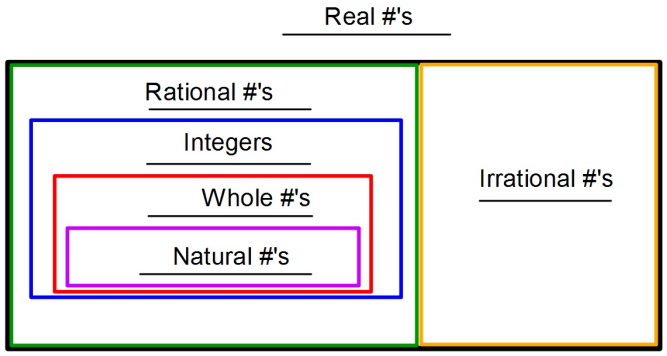
$27x + 10 = 180$

$27x = 170$

$x = 170/27$

You can eliminate all denominators by multiplying both sides of the equation by the LCM of all denominators.

This is only one of several methods you can use to solve this problem. We discussed other related methods in class.



Real #'s

Rational #'s — Any # that can be written as a fraction
ex: 8, .3, — Terminating decimals
.25, — Repeating decimals

Integers
ex: ... -3, -2, -1, 0, 1, 2, 3, ...

Whole #'s — non negative integers
ex 0, 1, 2, 3, ...

Natural #'s — positive integers
ex 1, 2, 3, ...

Irrational #'s
— non repeating & non terminating decimals
ex: π, $\sqrt{3}$,

Summary **Properties of Real Numbers**

Let a, b, and c represent real numbers.

Property	Addition	Multiplication
Closure	$a + b$ is a real number.	ab is a real number.
Commutative	$a + b = b + a$	$ab = ba$
Associative	$(a + b) + c = a + (b + c)$	$(ab)c = a(bc)$
Identity	$a + 0 = a, 0 + a = a$	$a \cdot 1 = a, 1 \cdot a = a$
Inverse	$a + (-a) = 0$	$a \cdot \frac{1}{a} = 1, a \neq 0$
Distributive	$a(b + c) = ab + ac$	

The Additive Inverse of a number is its OPPOSITE.

The opposite of a number is....

- The same distance from zero but on the other side of zero
- Same # but different sign
- The sum of opposites is always ZERO.

The Multiplicative Inverse of a number is it's RECIPROCAL.

The reciprocal of a number ....

- Is one over that number
- Has the same sign as that number
- The product of a number and its reciprocal is always ONE.