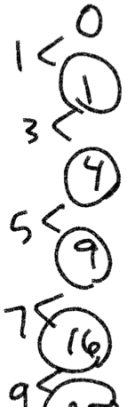
W-A1 Algebra 1 9/29

Rational / Irrational Rational → type



1.) 0.789789789... rational, repeating

2.) 5 rational counting whole integer

3.) 3/4 rational fraction

4.) $\sqrt{80}$ irrational

5.) 0.313131... rational terminal

6.) 0.9876... irrational

7.) -9 rational integer

8.) 0 rational whole integer

9.) $\sqrt{36}$ rational perfect square

10.) 0.222...9 rational repeating

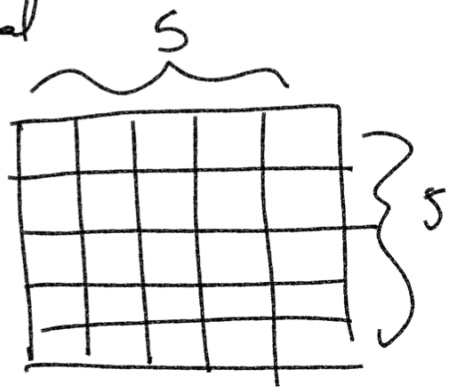
11.) 0.10102... irrational

12.) $\sqrt{100}$ rational perfect square

Types: { counting, whole, integer, repeating decimal, terminal decimal, perfect square

1.) $8(4s - t)$ $s = 3$ $t = 9$

$8(4(3) - 9)$ $8(12-9)$ $8(3) = 24$



2.) $\frac{5s^2}{t}$ $s = 2$ $t = 8$

$\frac{5(2)^2}{8}$ $\frac{5(4)}{8} = \frac{20 \div 4}{8 \div 4} = \boxed{\frac{5}{2}}$

3.) $\frac{2t^2}{s^3}$ $s = 4$ $t = 6$

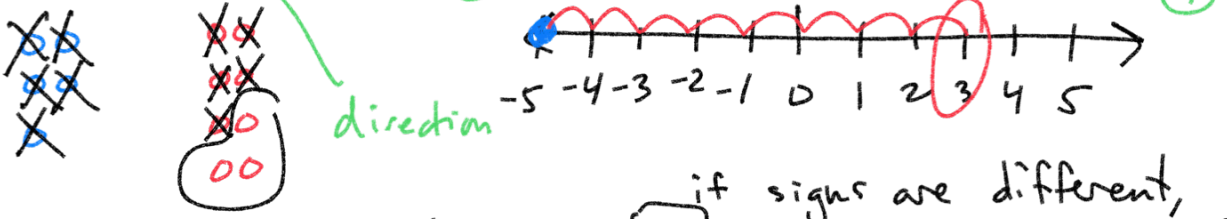
$\frac{2(6)^2}{(4)^3} = \frac{2(36)}{64} = \frac{72 \div 8}{64 \div 8} = \boxed{\frac{9}{8}}$

Adding Real Numbers

start

$-5 + 8 = 3$

direction



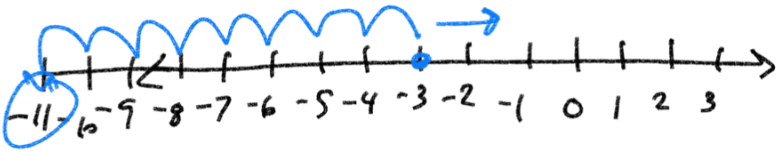
$-10 + 4 = -6$ if signs are different, we take their difference

"10 - 4"

if signs are the same, we take their sum.

$-3 + (-8) = -11$

$-3 + (-8)$



1.) $4 + (-8)$ -4

2.) $-9 + 3$ -6

3.) $2 + 7$ 9

4.) $-5 + (-8) = -13$

5.) $12 + (-7)$ $12 - 7$ 5

6.) $-1 + 8$ 7

7.) $-3 + (-15)$ -18

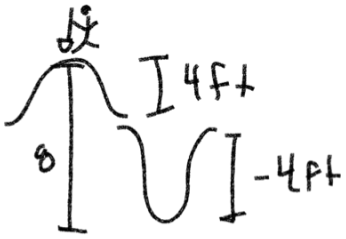
8.) $6 + 9$ 15

9.) $-11 + (-3)$ -14

10.) $-13 + 7$ -6

11.) $8 + 6$ 14

12.) $4 + (-11)$ -7



1-5 Subtracting Reals

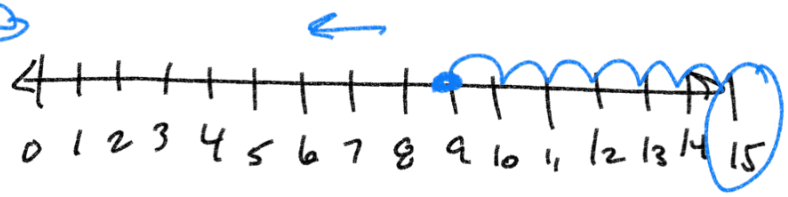
$7 - 8 = 7 + (-8) = -1$

$7 - 8 = -1$

$-3 - 11 = -3 + (-11) = -14$

$11 - 5 = 6$

$9 - (-6) = 15$ (backwards)



$9 + (+6) = 15$

1.) $-8 - 4 = -12$
$-8 + (-4)$

2.) $8 - 4 = 4$

3.) $8 - (-4) = 12$
$8 + 4$

4.) $-8 - (-4)$
$-8 + (+4) = -4$

5.) $6 - 9$
$6 + (-9) = -3$

6.) $-6 - 9 = -15$

7.) $6 - (-9) = 15$
$6 + + 9$

8.) $-6 - (-9)$
$-6 + 9 = 3$

9.) $7 - (-11) = 18$
$+ +$

10.) $-7 - (-11)$
$-7 + 11 = 4$

11.) $-7 - 11 = -18$

12.) $7 - 11 = -4$

Mult/Div Reals

Public School

You	Everyone else	situation
happy	happy	good
sad	happy	bad
happy	sad	bad
sad	sad	good!

$8 * (-4) = -32$

$-8 * 4 = -32$

$8 * 4 = 32$

$-8 * (-4) = 32$

$-7 * 8 = -56$

$7 * 8 = 56$

$-7 * -8 = 56$

$7 * -8 = -56$

$\frac{-54}{9} = -6$

$\frac{-54}{-9} = 6$

$\frac{54}{-9} = -6$

$\frac{54}{9} = 6$