

Review

6 less than a number

$$\boxed{x - 6}$$

Joseph \$20

Ivan \$14

$$6 - 20 = -14$$

5 more than the product of 9 and c

$$\boxed{9c + 5}$$

$$(9 * c) + 5$$

$$5 + 9c$$

$$5 + (9 * c)$$

The product of 3 and the quotient  
of 10 and h

$$3 * \left(\frac{10}{h}\right)$$

The difference between 8 and the sum  
of s and 4

$$8 - (4 + s)$$

$$8 - (s + 4)$$

$$22.) \quad 50 \div 2 + 15 * 4$$

$$\quad \quad \quad \underbrace{25 + 15 * 4}$$

$$\quad \quad \quad \quad \quad \underbrace{25 + 60 = \boxed{85}}$$

$$36.) \quad 14 + 6 * 2^3 - 8 \div 2^2$$

$$\quad \quad \quad \downarrow$$

$$14 + 6 * 8 - 8 \div 2^2$$

$$14 + 6 * 8 - 8 \div 4$$

$$\quad \quad \quad \underbrace{14 + 48 - 8 \div 4}$$

$$\quad \quad \quad \quad \quad 14 + 48 - 2$$

$$35.) \quad 5 + 4^2 * 8 - 2^3 \div 2^2$$

$$5 + 16 * 8 - 2^3 \div 2^2$$

$$\quad \quad \quad \downarrow$$

$$5 + 16 * 8 - 8 \div 2^2$$

$$\quad \quad \quad \quad \quad \downarrow$$

$$5 + 16 * 8 - 8 \div 4$$

$$\quad \quad \quad \underbrace{5 + 128 - 8 \div 4}$$

$$\quad \quad \quad \quad \quad 5 + 128 - 2$$

$$\begin{array}{c} \downarrow \downarrow \\ \text{PEMDAS} \\ \hline 2^3 = 2 * 2 * 2 = 8 \end{array}$$

$$14 + 48 - 2$$

$$62 - 2 = \boxed{60}$$

$$- (2)^3 = - 8$$

$$\begin{array}{c} \downarrow \\ 5 + 128 - 2 \\ \hline 133 - 2 \\ \hline \textcircled{131} \end{array}$$

$$\begin{array}{c} P \\ E \\ M \\ D \\ \textcircled{AS} \end{array}$$

$$\begin{array}{c} \cancel{5 - 128 + 3} \\ \uparrow \end{array}$$

# 1-3 Exploring Real Numbers

Rational number that can be put into a fraction.

Ratio fraction

Irrational number that cannot be put into a fraction.

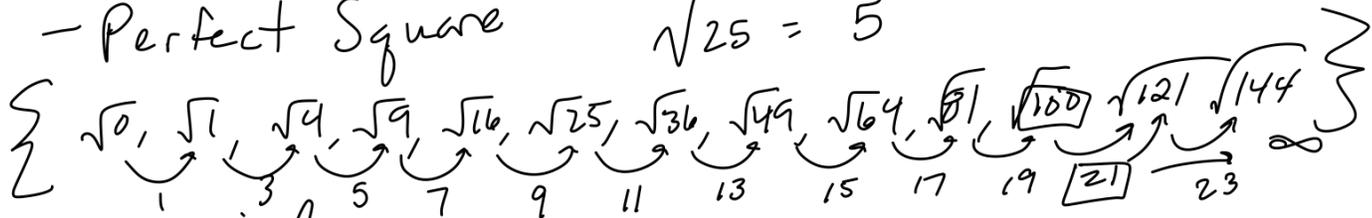
## Rational Numbers

- Counting Numbers: 1, 2, 3, 4, 5, ...
- Whole Numbers: 0, 1, 2, 3, 4, ...
- Integers: ... -4, -3, -2, -1, 0, 1, 2, 3, 4, ...  
are whole numbers and their opposite

- Terimal decimal  $0.36 = \frac{36}{100} = \frac{9}{25}$

- Repeating decimal pattern single group  
 $0.4444\dots = 0.\overline{4} = \frac{4}{9}$   
 $0.142857142857\dots = 0.\overline{142857} = \frac{1}{7}$

- Perfect Square  $\sqrt{25} = 5$



## Irrational

- Non-repeating decimal  $0.574329\dots$
- Non-Perfect square  $\sqrt{90}$

$\frac{1}{3} \rightarrow$  rational  $\rightarrow$  it's a fraction

-3 rational  
integer

4 rational  
whole, counting,  
integers.

0.656565...  
rational, repeating

$\frac{65}{99} \sqrt{80}$  irrational

0.78   
rational terminal

$\sqrt{16}$  rational  
perfect square

0.797877...  
irrational

0 rational  
whole, integers

0, 1, 4, 9, 16, 25  
1 3 5 7 9

Least to Greatest  $\rightarrow$

$-\frac{8}{9}$     $-\frac{7}{8}$     $-\frac{22}{25}$

$-\frac{1600}{1800}$ ,  $-\frac{1584}{1800}$ ,  $-\frac{1575}{1800}$

$(8)(25) - 8$   
 $(8)(25)(9)$

$(25)(9) - 7$   
 $(25)(9)(8)$

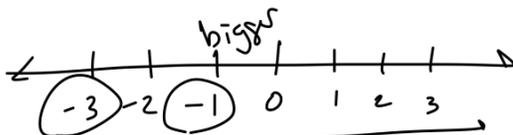
$(8)(9) - 22$   
 $(8)(9)(25)$

$-\frac{1600}{1800}$

$-\frac{1575}{1800}$

$-\frac{1584}{1800}$

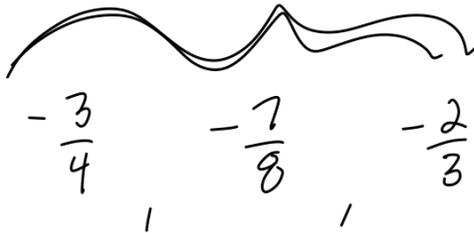
$\left\{ -\frac{8}{9}, -\frac{22}{25}, -\frac{7}{8} \right\}$



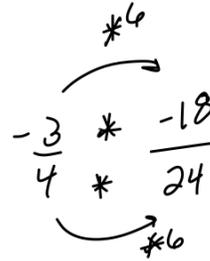
1.)  $-3, -7, 4$

Least  $\rightarrow$  Greatest

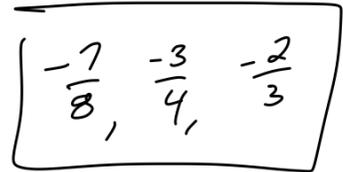
$-7, -3, 4$



Least  $\rightarrow$  Greatest



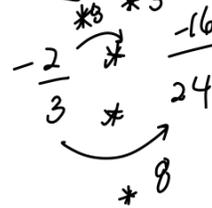
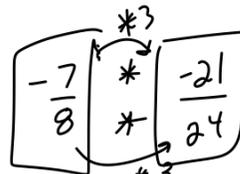
$\frac{-21}{24}, \frac{-18}{24}, \frac{-16}{24}$   
 $\downarrow \quad \downarrow \quad \downarrow$



4: 4, 8, 12, 16, 20,  $\boxed{24}$ , 28...

8: 8, 16,  $\boxed{24}$ , 32, 40...

3: 3, 6, 9, 12, 15, 18, 21,  $\boxed{24}$ , ...



Quiz 1  
due tonight



HW

1-3 evens  
 online HW 2 1-1, 1-2  
 online HW 3 1-3  
 Quiz 2 (Sep 21st)  
 Quiz 3 (Sep 28th)