REVIEW

① Order of operations – BEDMAS (1 2 3 3 4 4)

ex. $3 + 6 \times 5 \div 2$

$3 + 30 \div 2$

$3 + 15$

18

ex. $\frac{6+3^2}{2\times(8-5)}$ do top and bottom seperetly

$\frac{6+9}{2\times3}$

$\frac{15}{6}$

$15 \div 6 = 2.5$

② Negative Numbers

Adding and Subtracting: use a number line

ex. $5 + -3$

$5 - 3 = 2$

adding = move forward

subtracting = move backward

$+ - = -$

$- - = +$

Think about money: positive #s or adding is like saving money

negative or subtracting is like spending.

Negative Numbers

multiplying and dividing:

$+ \times + = +$

$- \times - = +$

} same sign = + answer

$+ \times - = -$

$- \times + = -$

} different signs = negative answer

ex. $-6 \times 3 = -18$

$-8 \times -2 = 16$

$4 \times -5 = -20$

③ Fractions

"of" means multiply: 24 Kids, 1/3 of them want pizza. How many want pizza

$$\frac{1}{3} \times 24$$

To change whole #'s into fractions put them over 1

$$\frac{1}{3} \times \frac{24}{1}$$

Multiplying: multiply across the top
and
multiply across the bottom

$$\frac{1}{3} \times \frac{24}{1} = \frac{24}{3}$$

Fractions

Dividing ÷ Flip the second fraction and then multiply

$$\frac{8}{5} \div \frac{1}{2}$$

$$\frac{8}{5} \times \frac{2}{1}$$

$$\frac{16}{5}$$

Fractions

Adding and Subtracting: You have to have the same # on the bottom. You only add or subtract on the top

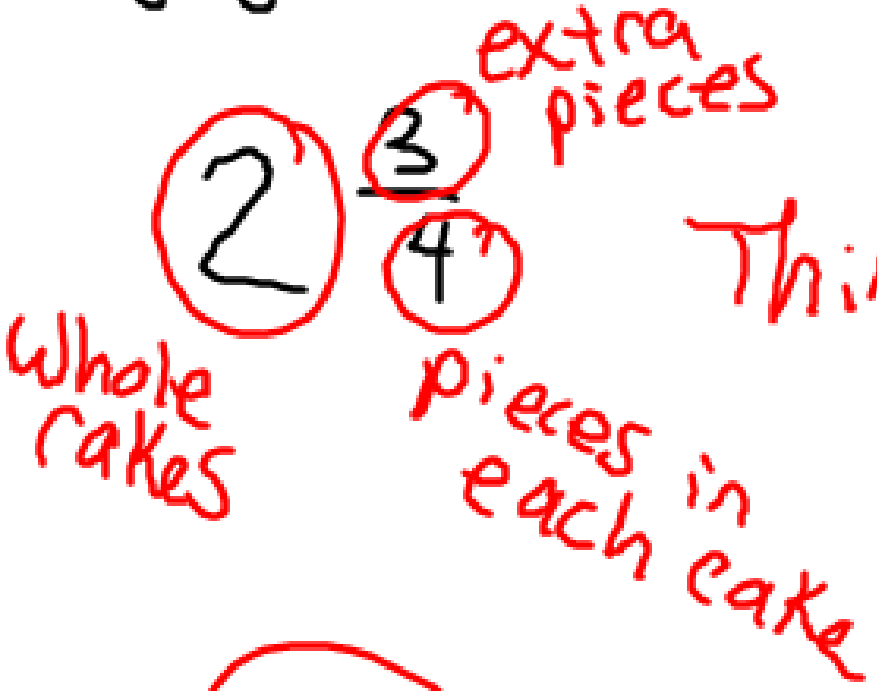
ex. $\frac{6}{5} + \frac{2}{5} = \frac{8}{5}$

You can multiply top and bottom of a fraction by the same # to make an equal fraction

$\frac{3}{8} \sim \frac{\times 8}{\times 3}$ $\quad \frac{16}{24} - \frac{3}{24} = \boxed{\frac{13}{24}}$

Fractions

changing a mixed fraction into improper Fraction



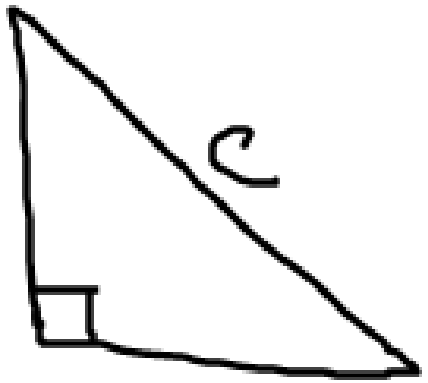
$\frac{11}{4}$

$2\frac{3}{4} = \frac{4 \times 2 + 3}{4}$

$\frac{11}{4}$

Pythagorean Theorem

Only allowed For right triangles (triangles with 90°)



$$a^2 + b^2 = c^2$$

c has to be the longest side

C is not allowed to touch the right angle

90° marked with a little square

⑥ squares and square roots

Square = multiply by itself

$$8^2 = 8 \times 8 = 64$$

Square root is the opposite of square

$\sqrt{64}$ = what times itself equals 64

$$\sqrt{64} = 8$$

⑥ Probability

$$\frac{\#\text{ of things you're asked about}}{\text{total \# of things}}$$

Probability of multiple things: multiply together

ex. prob of rolling a 5 and flipping heads : $\frac{1}{6} \times \frac{1}{2} = \frac{1}{12}$

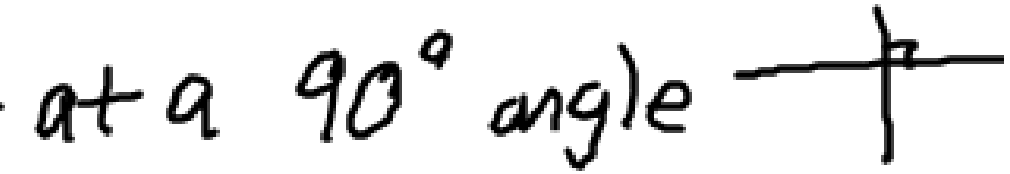
(7) Percent Increase and Decrease

$$\frac{\text{change in value}}{\text{original amount}} \times 100$$

(8) All angles in a triangle add up to 180°

Equilateral Triangle: all angles equal 60°
all sides are equal

⑨ Definitions

Perpendicular: meet at a 90° angle 

Bisect: cut exactly in half

line = 8 cm
bisect it and
each side is 4 cm