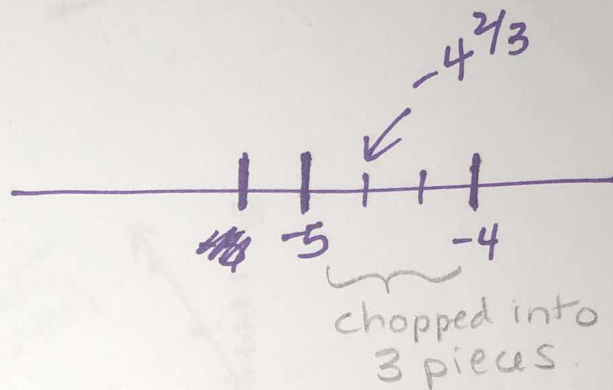


Flashback #2

1. $2^7 \cdot (2^4)^3$ Power of a power
 $2^7 \cdot 2^{12}$ mult. law of exp Base = 2
 2^{19} Exponent = 19

2. $1\frac{3}{4} \cdot \frac{8}{9} \cdot \frac{-3}{1}$
 $\frac{7}{4} \cdot \frac{8}{9} \cdot \frac{-3}{1}$
 $\frac{-14}{3}$ or $-4\frac{2}{3}$

Just do it!



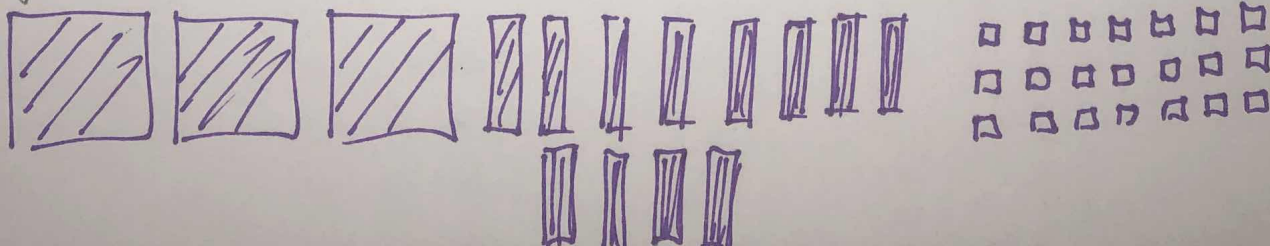
3. $6(3x-2) - (4x+9) + (3x^2-2x)$ remove brackets
 $18x - 12 - 4x - 9 + 3x^2 - 2x$

$3x^2 + 18x - 4x - 2x - 12 - 9$
 $3x^2 + 12x - 21$

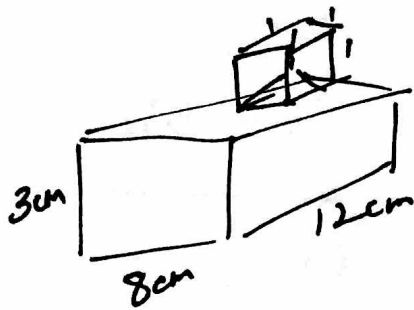
Collect like terms (same variable exactly)

Coefficients: 3, 12
 Constant: -21

Colored is positive



4.



$$\begin{aligned}
 SA &= 2lw + 2wh + 2lh \\
 &= 2(3)(8) + 2(8)(12) + 2(12)(3) \\
 &= 48 + 192 + 72 \\
 &= 312 \text{ cm}^2
 \end{aligned}$$

$$\begin{aligned}
 SA_{\text{cube}} &= 6 \cdot s^2 \\
 &= 6(1)^2 \\
 &= 6
 \end{aligned}$$

$$\begin{aligned}
 \text{Total SA} &= SA_1 + SA_2 - SA_{\text{overlap}} \\
 &= 312 + 6 - 2
 \end{aligned}$$

→ bottom of 1 cm cube, covers 1 cm² of larger one

$$SA_{\text{total}} = 316 \text{ cm}^2$$

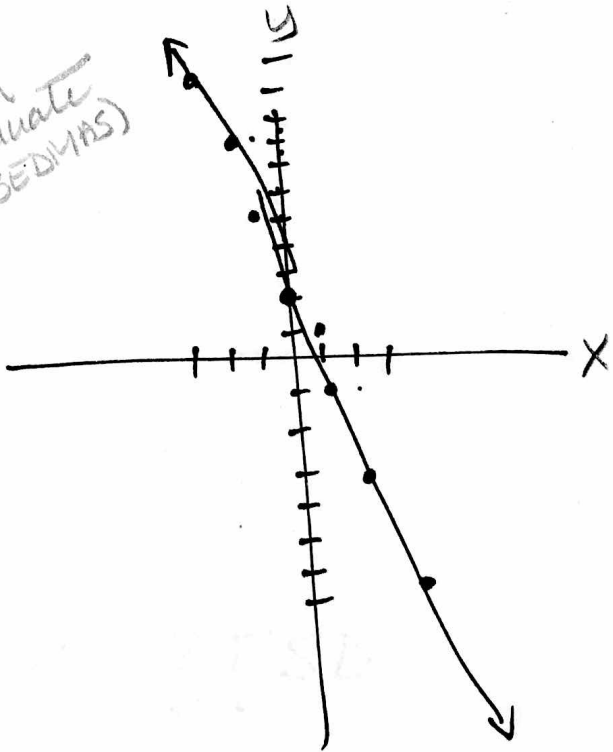
5. $y = -3x + 2$

x	y
-3	11
-2	8
-1	5
0	2
1	-1
2	-4
3	-7

drop into given equation and evaluate (BEDMAS)

$$\rightarrow -3(-3) + 2$$

Choose a bunch of x values to put in ↓



$$6. \quad \frac{10 - 4^2 + (16 \div -8) - 1}{-10 - 8(-3)}$$

Just a 2 layer
BEDMAS question

Complete each
part separately

$$\frac{10 - 4^2 + -2 - 1}{-10 + 24}$$

$$\frac{10 - 16 + -2 - 1}{14}$$

$$\frac{-6 - 2 - 1}{14}$$

$$\frac{-8 - 1}{14}$$

$$\left(\frac{-9}{14} \right)$$

$$7. \quad \frac{2}{3} (\frac{x}{1} - \frac{9}{1}) = \frac{1}{4} - x \quad \text{distribute} \quad \checkmark \checkmark \text{BFSD}$$

$$12 \left(\frac{2}{3}x - \frac{18}{3} \right) = \left(\frac{1}{4} - x \right)$$

$$8x - 72 = 3 - 12x$$

$$+12x$$

$$+12x$$

$$20x - 72 = 3$$

$$+72 \quad +72$$

$$\frac{20x}{20} = \frac{75}{20}$$

divide

$$x = 3.75$$

or $\frac{15}{4}$

Sort
(zero
pairs

check

$$\frac{2}{3} \left(\frac{15}{4} - 9 \right) = \frac{1}{4} - \frac{15}{4}$$

$$\frac{20}{20} \cdot \frac{15}{4} - \frac{18}{3} = \frac{1}{4} - \frac{15}{4}$$

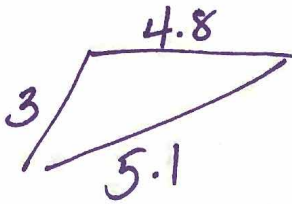
$$\frac{15}{6} - \frac{36}{6} = \frac{1}{4} - \frac{15}{4}$$

$$\frac{-21}{6} \div \frac{3}{3} = \frac{1}{4} - \frac{15}{4}$$

$$-7/2 = -7/2 \quad \checkmark$$

multiply
by
(12)

8.



means $\frac{250}{100}$
 $250\% \rightarrow 2.5$ scale factor

$$\therefore 3 \cdot 2.5 \rightarrow 7.5 \text{ cm}$$

$$4.8 \cdot 2.5 \rightarrow 12 \text{ cm}$$

$$5.1 \cdot 2.5 \rightarrow 12.75 \text{ cm}$$