

Flashback #3

1. $\sqrt{\frac{16}{25}} = \frac{4}{5}$ because $\frac{4}{5} \cdot \frac{4}{5} = \frac{16}{25}$

2. $-6 + 2x + 4x^2 - (3x - 5) + 5x(x + 2)$

$-6 + 2x + 4x^2 - 3x + 5 + 5x^2 + 10x$

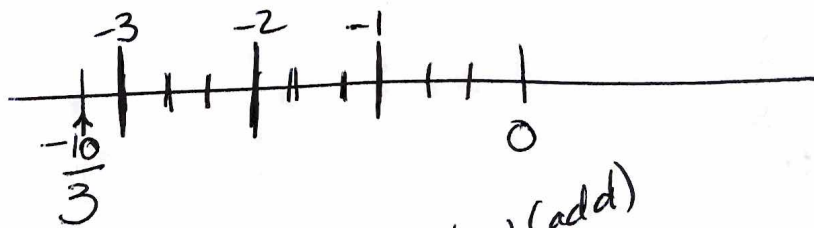
$4x^2 + 5x^2 + 2x - 3x + 10x - 6 + 5$ group

$9x^2 + 9x - 1$

3. $(x + 2)(2x - 3) \rightarrow 2x^2 - 3x + 4x - 6$

$\rightarrow 2x^2 + x - 6$

4. $-2 \div \frac{3}{5} \rightarrow -\frac{2}{1} \times \frac{5}{3} \rightarrow \frac{-10}{3}$ or $-3\frac{1}{3}$



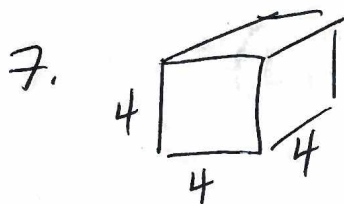
5. $\frac{10^9 \cdot 10}{(10^2)^3} \rightarrow \frac{10^9 \cdot 10^1}{(10^2)^3}$ mult. law (add)

$\rightarrow \frac{10^{10}}{10^6}$ Power of power (mult)

$\rightarrow 10^4$ division law (subtract)

6. $3.5 + \sqrt{16} \left(\frac{5}{8}\right)$

$$\begin{aligned} &\downarrow \\ &\frac{35}{10} + \frac{4}{1} \left(\frac{5}{8}\right) \rightarrow \overset{\times 4/4}{\frac{35}{10}} + \overset{\times 5/5}{\frac{20}{8}} \rightarrow \frac{140}{40} + \frac{100}{40} \\ &\hspace{15em} \rightarrow \frac{240}{40} \rightarrow 6 \end{aligned}$$



$$\begin{aligned} SA &= \text{area of one side} \times 6 \\ &= (4 \cdot 4) \times 6 \\ &= 16 \cdot 6 \\ SA &= 96 \text{ cm}^2 \end{aligned}$$

8. $\frac{3x-4}{2} = 9 \rightarrow \left(\frac{3x-4}{2}\right)^2 = (9)^2$

$$\begin{aligned} 3x - 4 &= 18 \\ +4 &\quad +4 \\ \hline 3x &= 22 \\ x &= \frac{22}{3} \end{aligned}$$

check

$$\begin{array}{r} \frac{3\left(\frac{22}{3}\right) - 4}{2} \quad | \quad 9 \\ \hline \frac{22 - 4}{2} \\ \hline \frac{18}{2} \\ \hline 9 = 9 \checkmark \end{array}$$

9. 3, 7, 11, 15, ...

x	y
1	3
2	7
3	11
4	15

$\rightarrow 4x + \square = y$
 $4(1) + \square = 3$
 $4 + \square = 3$
 \downarrow
 -1

∴

$y = 4x - 1$

$$10. \quad (3, 1) \quad (-2, 4) \quad (0, 10)$$

enlarged by 5 (\therefore Scale factor = 5)

$$\therefore (3, 1) \rightarrow (15, 5)$$

$$(-2, 4) \rightarrow (-10, 20)$$

$$(0, 10) \rightarrow (0, 50)$$