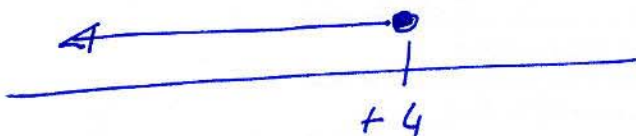


① $A = \{x \in \mathbb{R} \mid -6 \leq x < 0\} \quad [-6, 0)$



$B = (-\infty, 4] \rightarrow B = \{x \in \mathbb{R} \mid x \leq 4\}$



② $2\sqrt[3]{6} - 3\sqrt[3]{75} = \frac{24}{9} - \frac{124}{33} = \frac{264 - 372}{99} = \frac{-108}{99} = \frac{-36}{33}$

$2\sqrt[3]{6} = \frac{26 - 2}{9} = \frac{24}{9} = \frac{-12}{11} = -1\overline{09}$

$3\sqrt[3]{75} = \frac{375 - 3}{99} = \frac{372}{99} = \frac{124}{33}$

③
$$\frac{\sqrt{a^3} \sqrt[5]{b^7 \cdot a}}{\sqrt[3]{a^7 \cdot \sqrt{b^3 \cdot a^5}}} = \frac{a^{\frac{3}{2}} \cdot b^{\frac{7}{10}} \cdot a^{\frac{1}{10}}}{a^{\frac{7}{3}} \cdot b^{\frac{3}{6}} \cdot a^{\frac{5}{6}}} =$$

$$= a^{\frac{3}{2} + \frac{1}{10} - \frac{7}{3} - \frac{5}{6}} \cdot b^{\frac{7}{10} - \frac{3}{6}} = a^{\frac{45 + 3 - 70 - 25}{30}} \cdot b^{\frac{21 - 15}{30}} =$$

$$= a^{-\frac{47}{30}} \cdot b^{\frac{6}{30}} = a^{-\frac{47}{30}} \cdot b^{\frac{1}{5}}$$

④ $3 \cdot \sqrt{300} - 5\sqrt{48} + 2\sqrt{50}$

300		2	48		2	50		2
150		3	24		2	25		5
50		2	12		2	5		5
25		5	6		2	1		
5		5	3		3			
1			1					

$$= 3 \cdot \sqrt{2^2 \cdot 5^2 \cdot 3} - 5\sqrt{2^4 \cdot 3} + 2\sqrt{2 \cdot 5^2}$$

$$= 3 \cdot 2 \cdot 5 \sqrt{3} - 5 \cdot 2^2 \sqrt{3} + 2 \cdot 5 \sqrt{2}$$

$$= 30\sqrt{3} - 20\sqrt{3} + 10\sqrt{2}$$

$$= 10\sqrt{3} + 10\sqrt{2} = 10(\sqrt{3} + \sqrt{2})$$

• $12000 - 23 \cdot 10^4 - 0'005 \cdot 10^8$

$1'2 \cdot 10^4 - 23 \cdot 10^4 - 50 \cdot 10^4 = -71'8 \cdot 10^4 = \underline{\underline{-71'8 \cdot 10^5}}$

⑤ $\sqrt[5]{537824} = \sqrt[5]{2^5 \cdot 7^5} = 2 \cdot 7 = 14$

537824		2
268912		2
134456		2
67228		2
33614		2
16807		7
2401		7
343		7
49		7
7		7
1		

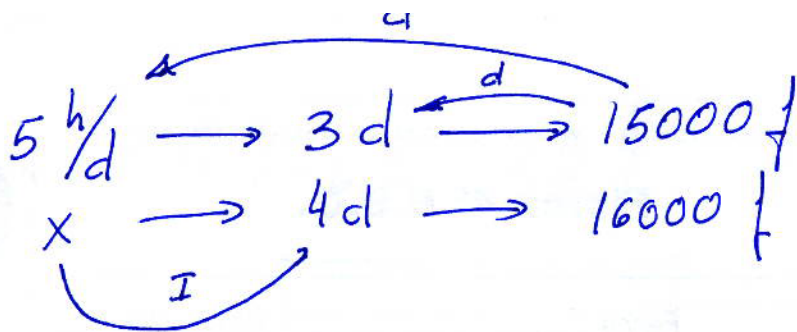


⑥

$$(2^4)^{-3} = 2^{-12} = \frac{1}{2^{12}}$$

$$\frac{16 \cdot 2^{-3}}{4^2} = \frac{2^4 \cdot 2^{-3}}{(2^2)^2} = \frac{2^1 \cdot 2^{-3}}{2^4} = 2^{-3} = \frac{1}{2^3}$$

7



$$\frac{5 \cdot 3}{x \cdot 4} = \frac{15000}{16000}$$

$$5 \cdot 3 \cdot 16 = 15 \cdot x \cdot 4$$

$$x = \frac{5 \cdot 3 \cdot 16}{15 \cdot 4} = 4 \frac{h}{d}$$