Qus 2 $\frac{A \times B}{A+B} \Rightarrow \frac{10 \times 15}{15} = 6$

Qus 2 $M_1 D_1 = M_2 D_2 \Rightarrow 12 \times 24 = 8 \times D_2$

$D_2 = 36$

Qus 3 $A \rightarrow x \quad B \rightarrow 2x \Leftarrow$ times

$\frac{A \times B}{A+B} = \frac{2x^2}{3x} = 14 \Rightarrow x = 21$ days

Qus 4 $\frac{A \times B}{A+B} = \frac{20 \times 30}{20+30} = 12$

Qus 5 $\frac{140}{7} = 20$ m/s

$\hookrightarrow 20 \times \frac{18}{5} = 72$ kmph

Qus 6 $\frac{1}{4}$ of $x = 20 \Rightarrow x = 80$ min

$\hookrightarrow$ usual time + late

usual time = 60

Ques7 Sum of train length = 120+180

= 300

Sum of speed = 90kmph = $90 \times \frac{5}{18} = 25$ m/s

time = $\frac{300}{25}$ = 12 sec

Ques8 A = 125 B = 100

$\frac{125-100}{125} \times 100$ = 20%

Ques9 CP = 800

5% gain ⇒ 800 + 40 = 840

Ques10 100 → CP

120 → MP

10% → 12 discount

SP = 120 − Discount

= 108

profit = 8%

(11) $1000 \xrightarrow{10\%} 1100 \xrightarrow{10\%} 1210$

(12) 18 19 (20) 21 (22) — right

(13) $A = 2x$, $B = 3x$

$$\frac{B}{C} = \frac{4}{5}$$

$$\frac{3x}{C} = \frac{4}{5} \Rightarrow C = \frac{15x}{4}$$

$$A : B : C = 2x : 3x : \frac{15x}{4}$$

$$\Rightarrow 8x : 12x : 15x$$

(14) Hit and trial

(15) $\frac{100}{\text{year}} = \frac{100}{8} = 12.5$

(16) $SI = \frac{6000 \times 10 \times 2}{100} = 1000$

$$CI = 6000 \xrightarrow{10\%} 5500 \xrightarrow{10\%} 6050$$

$$CI = 6080 - 6000 = 1050$$

(60)

formula $= P \times \left(\frac{R}{100}\right)^{\text{year}}$

$$= 6000 \times \left(\frac{1}{10}\right)^2 = 60$$

(17) $7^{95} - 3^{58} = 7^3 - 3^2 = 343 - 9$

$= -6$

$+10$

4

$4\overline{)95}(23$

$\frac{8}{16}$

$\frac{12}{3}$

$4\overline{)58}(12$

$\frac{4}{18}$

$\frac{16}{2}$

cycle = 4

If answer is negative then +10

(18) $1 \quad 4 \quad 9 \quad 16 \quad 25 \quad (\;) \Rightarrow 36$

$3 \quad 5 \quad 7 \quad 9 \quad 11$

Ques 19 $\frac{n(n+1)}{2} = \frac{20(20+1)}{2} = 210$

(20) $x + \frac{1}{x} = 4$

$\left(x + \frac{1}{x}\right)^2 = x^2 + \frac{1}{x^2} + 2 \times x \times \frac{1}{x}$

$16 = x^2 + \frac{1}{x^2} + 2$

$x^2 + \frac{1}{x^2} = 14$

(21) (3,6) (4,5), (5,4), (6,3)

$\Rightarrow$ probability $= \frac{4}{6\times6} = \frac{4}{36} = \frac{1}{9}$

(22) volume, $= 4^3 = 64$

volume small cube $= 1^3 = 1$

no. of cube $= \frac{64}{1} = 64$

(23) 60

(24) $12x = 108$ | $3 \times 20 = 180$

$x = 9$

(25) hour angle $= \frac{360}{12} \times 4 = \boxed{120^\circ}$ (from 12)

minute hand $= \frac{360}{12\times60} = 0.5^\circ/\text{min}$

total minute $= 4\times60 + 20$

$= 260$ minute

difference

$= 130 - 120 = 10^\circ$

minute hand $= 260 \times 0.5^\circ/\text{min}$

$\boxed{= 130^\circ}$

(26) $\pi r^2 = 154 \Rightarrow \frac{22}{7} \times r^2 = 154 \times 7$

$\boxed{r = 7}$

(27) 0.00002

(28) 0.66, 0.6, 0.62, 0.63

(30) $\frac{A}{B} \times 100 = \frac{100}{50} \times 100 = 200\%$

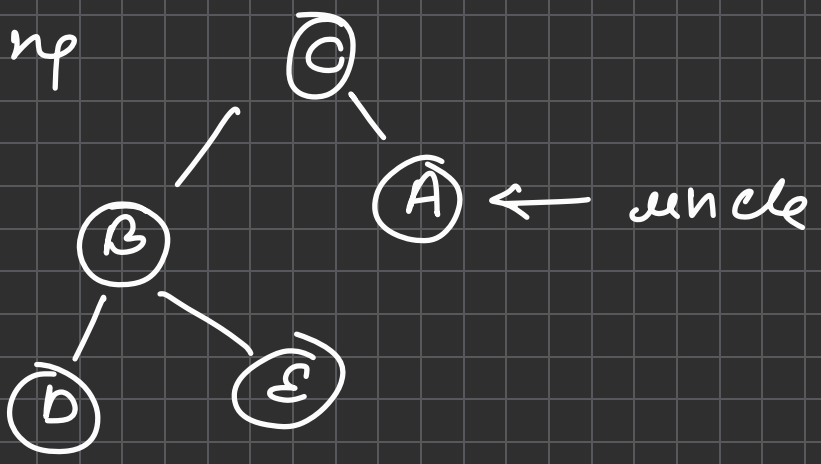
(31) CAT = 3 + 1 + 20 = 24

DOG = 4 + 15 + 7 = 26

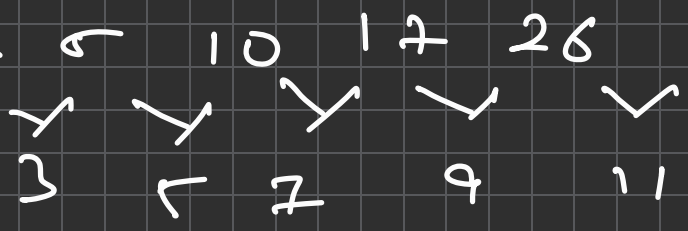
RAT = 18 + 1 + 20 = 39

(32) X wrong

(33)



(34)

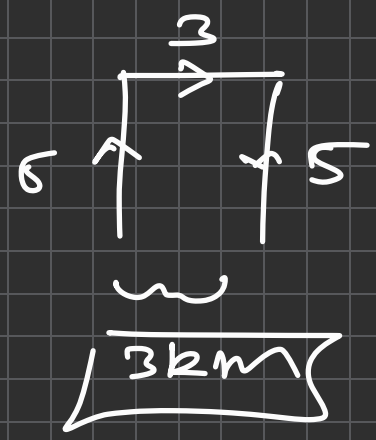


(35) IR

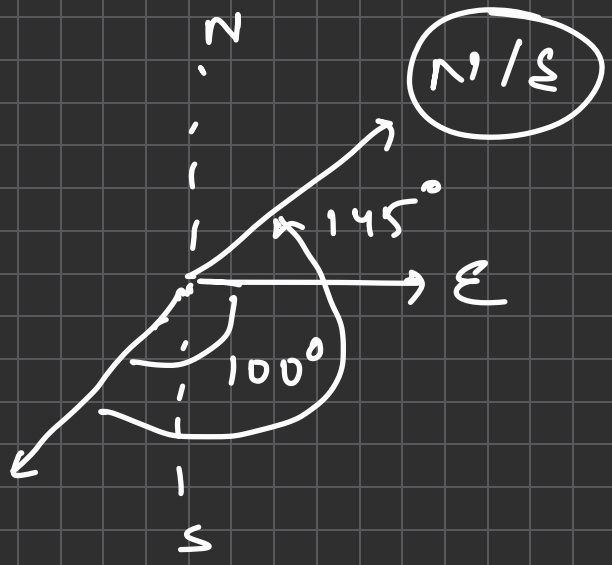
(36)

(38) 1 4 4 (not cube)

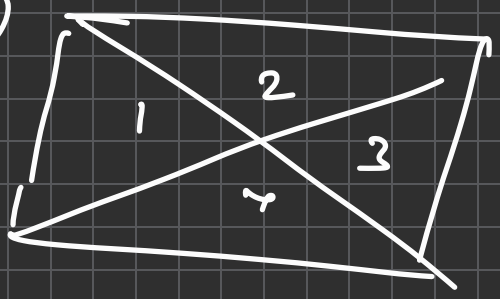
(39)



(40)



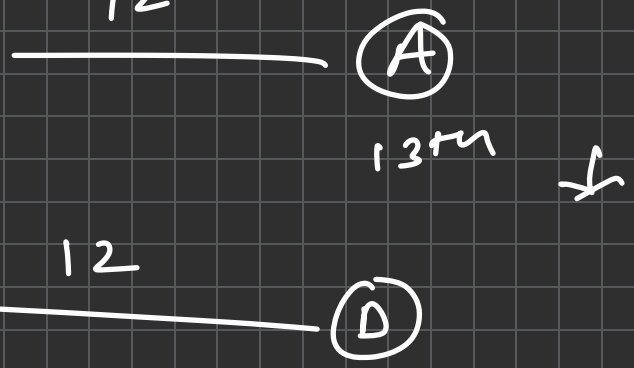
(41)

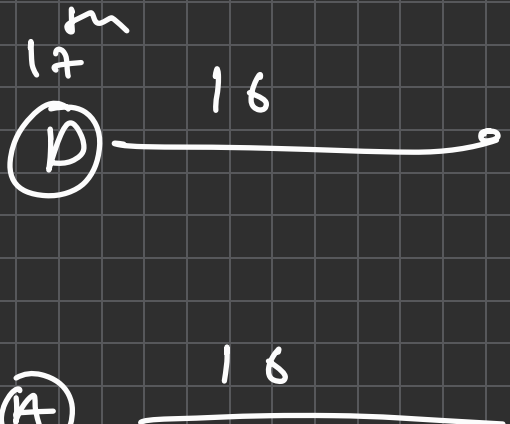


4 × 2 = (8)

big triangle + small

(42)

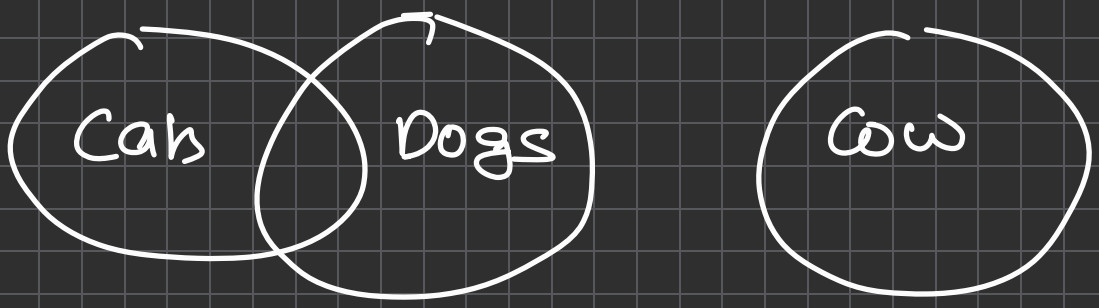




(21)

$= 20 + 1 + 16$

$= 37$

(43) 

+ true

(44) 3, 1, 4, 2

(45) DNF

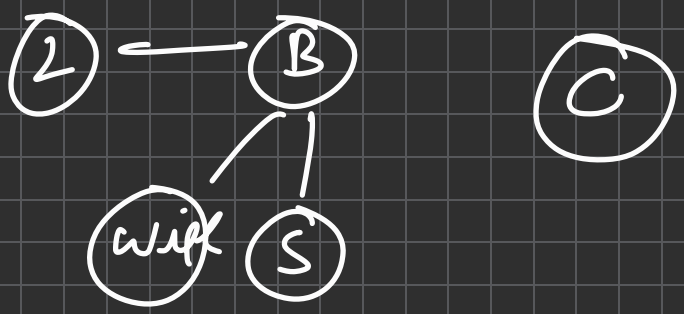
(46) 12·00 − 3·00 = 9:00

(47) $15 \times 3 - 10 / 5 + 5$

$= 45 - 2 + 5$

$= 48$

(48) 3 sum of opp. = 7

(49) 

50 3^2 4^2 916

2^2 5^2 425

1^2 6^2 136

51 A

52 360

53 $7^2 - 1 = 48$

55 A

56 UK

57