Math

Revision Worksheet

1. d. None of the above
2. a) 10^{600}
3. Qns is ~~data~~ not in sequence.
4. the identity for multiplication of rational nos.
5. c) 7
6. b) 15%

1. b. 0
2. b. 7
3. b. 60
10. a. commutative law of addition
11. $\frac{33}{48}, \frac{34}{48}, \frac{35}{48}$
12. $(12)^{-2} \times 4^3 =$
13. $\frac{11m}{2}$ = 12 equal pieces $= \frac{\left(\frac{11}{12}\right)}{12} = \frac{11}{12 \times 12} = \frac{11}{24}$ m
14. LCM = 280, $\frac{8 \times 40}{7 \times 40} = \frac{320}{280}$

$\frac{-9 \times 35}{8 \times 35} = \frac{-135}{280}$ $\quad \frac{2 \times 56}{5 \times 56} = \frac{112}{280}$

$\frac{-3 \times 140}{2 \times 140} = \frac{-420}{280}$

$\frac{0 \times 280}{1 \times 280} \quad \frac{0}{280}$

$$\frac{-420}{80}, \frac{315}{280}, \frac{0}{280}, \frac{112}{280}, \frac{320}{280}$$

$$\frac{-3}{2}, \frac{-9}{8}, 0, \frac{2}{5}, \frac{8}{7}$$

15. Additive inverse = 7

Multipicative inverse = $\frac{-1}{7}$

$$7 - \frac{1}{7} = \frac{48}{7}$$

16. Perimeter of the triangle = Sum of 3 sides

$= 8y^2 - 9y + 4$

Sum of 2 sides = $3y^2 - 5y + 4y^2 + 12$

$= 7y - 5y + 12$

$\therefore 8y^2 - 9y + 4 - 7y^2 - 5y + 12 = y^2 - 4y - 8$

17. Work done by A in 1 day = $\frac{1}{20}$

Work done by B in 1 day = $\frac{1}{15}$

Then, work done by A and B in one day = $\frac{1}{20} + \frac{1}{15} = \frac{7}{60}$

If A and B does work together in 6 days

$= \frac{7}{60} \times 6 = \frac{7}{10}$

The work left = $1 - \frac{7}{10} = \frac{3}{10}$

Then B can do $\frac{3}{10}$ work = $\frac{3}{10} \times \frac{15}{1} = \frac{9}{2} = 4\frac{1}{2}$ days

18. i) P = ₹630, I = ₹126, T = 4yrs

~~Amount~~ $R = \frac{100 \times I}{P \times T} = \frac{100 \times 126}{630 \times 24} = \frac{100}{20} = 5\%$

ii) Let P = ₹100

∴ Amount = 2 × ₹100 = ₹200

Interest = A − P = ₹200 − ₹100 = ₹100

$T = 6\frac{1}{4}$ yrs $= \frac{25}{4}$ yrs

$R = \frac{100 \times I}{P \times T} = \frac{100 \times 100 \times 4}{100 \times 25} = 16$

19. P = ₹7500

R = 8%.

T = 2 yrs

$S.I = \frac{PRT}{100} = \frac{7500 \times 8 \times 2}{100} = ₹1200$

Interest for the 1st yr $= \frac{7500 \times 8 \times 1}{100} = ₹600$

Amount at the end of 1st yr = P + S.I

= ₹7500 + ₹600 = ₹8100

Principal for the 2nd year = ₹8100

Interest " " " " $= \frac{8100 \times 8 \times 1}{100} = ₹648$

Total C.I for 2 yrs = ₹600 + ₹6 + ₹28 = ₹1248

Difference between C.I and S.I for 2 yrs

= ₹1248 − ₹1200 = ₹48

20. Let the price of the sugar today be 100.

Then its price tommorow will be ₹125.

So, to bring the price back to original

N should decreased :-

$\frac{125 \cdot 100}{125} \times \frac{100 \cdot 20}{120} \times 4 = 20\%$

22) Amount Mohan paid for the article = ₹912
for peter : SP = 912, loss = 5%, CP

$CP = \left(\frac{100}{100-5}\right) \times 912 = \frac{100 \times 912}{95} = 960$

$= ₹960$

for John : SP = ₹960, Profit = 20%, CP

$\therefore C.P = \left(\frac{100}{100+20}\right) \times 960$

$= \frac{100}{120} \times 960$

$= 100 \times 8 = ₹800$

So, John paid for the article is ₹800.

23) Given,

Rajesh sold the scooter to Rahim at 8% loss.

Rahim sold the scooter to Prem at 5% profit.

C.P for Prem = ₹14,490

S.P of Prem = $\frac{100}{100+5} \times 14,490$

$= \frac{100}{105} \times 14,490 = ₹13800$

Now C.P of Rahim will be SP of Rajesh i.e ₹13800

C.P of Rajesh = $\frac{100}{100-8} \times 13800 = ₹15000$

S.P of the scooter for Rohim = ₹14,450
C.P " " " " " = ₹13,800

S.P of the scooter for Rajesh = ₹13800
C.P " " " " " = ₹13,100

24. $\frac{53}{63}, \frac{107}{126}, \frac{6}{7}, \frac{109}{126}, \frac{37}{42}$

25. i) $\sqrt{7.84} + \sqrt{78400}$

$= \frac{\sqrt{784}}{100} + \sqrt{784 \times 100}$

$= \frac{28}{10} + 28 \times 10$

$= 2.8 + 280 = 282.8$

ii) $\sqrt{0.0784} + \sqrt{0.000784}$

$= \sqrt{\frac{784}{10^4}} + \sqrt{\frac{784}{10^6}}$

$= \frac{28}{10^2} + \frac{28}{10^3}$

$= 0.28 + 0.028 = 0.308$

27. S.P of bicycle = ₹637
Loss% = 9%

$C.P = \left(\frac{100}{100-9}\right) \times 637$

$= \frac{100}{91} \times 637 = ₹700$

C.P = ₹700 and profit % = 5%

$S.P = \left(\frac{100+5}{100}\right) \times 700$

$= \frac{105}{100} \times 700 = ₹$

28. 3 mens = 6 boys
1 man = 2 boys
4 mens and 12 boys = 4+6 men = 10 men
If 3 men can finish a work in 20 days
10 men can finish the work
in $= \frac{20 \times 3}{10} = 6$ days

29. If 5 persons are maintained for 20 days with ₹2480
Then 1 person at $= \frac{2480}{20 \times 5} = \frac{2480}{100}$
$= ₹24.80$
So, the no. days ₹6944 can be maintained for 8 persons will be $= \frac{6944}{198.40}$
$= 35$ days

30. $n = \{-1\}, \{10\}$