

Hi,

Another 22 questions for you to solve in 20 minutes. The answers and the method to solve these questions are given at the end.

Kindly send in your suggestions for improvements.

<http://groups.yahoo.com/group/urpercentile/>

Q1. A salesman gets 20 % commission on the sales of first 3,800 Rs. For sales more than Rs 3,800 but less 9,000 he gets a commission of 25 % of the amount greater than 3,800. For sales more than 9,000 he gets 30 % of the amount greater than 9,000. A salesman gets 4,160 as commission. What percent of the total sales did he get as commission.

Q2. A person has to pay 20 % tax on first 4,700 he earned, for amount earned between 4,700 and 7,300 the tax is 25 % and for amount earned more than 7,300 the tax is 30 %. If he paid 24 % of his income as tax what was his income ? His income was more than 8,000.

Q3. A shop offers a discount to all its customers on the basis of the value of the purchase. If the purchase is less than Rs 4,500 , the customer gets a discount of 10 %. The customer gets 15 % discount on purchase between 4,500 and 8,400. The customer gets discount of 20 % on the purchase exceeding 8,400. If the discount received on the first slab is half the discount received on the last slab , what is the total discount received in terms of the percentage of the whole purchase?

Q4. An Insurance company charges 10 % premium for the transportation of goods worth 5,000 or less. A premium of 10 % of 5,000 plus 12 % of amount excess to 5000 but less than 9100 is charged. If the value of goods is more than 9,100 the premium charged is 20 % of the value in excess of 9,100. For a certain consignment the total premium charged is Rs 1932. What was the value of the consignment?

Q5. In an chemistry experiment two liquids Chemical A and Chemical B are to be mixed. The amount of Chemical B used depends upon the amount of chemical A used and on the following rules. If Chemical A is less than or equal to 4500 ml , Chemical B is equal to 8% of Chemical A. If the chemical A is more than 4,500 ml but less than 8,400 ml, chemical B is 8% of 4,500 + 12 % of the additional quantity of chemical A. If Chemical A is more than 8,400 then chemical B is equal to 8% of 4,500+ 12% of next 3,900 + 16 % of the balance. If in such an experiment , chemical B is found to be 12 % of chemical A, what is the quantity of Chemical A used which is certainly greater than 12,000 ?

Q6. The commission of a salesman is linked to the amount of sale made by him. He gets a certain percentage on his sales below 8,800. On sales between 8,800 to 12,000 he gets 12 %

and on sales above 12,000 he gets 15 % . He made a sales of 15,600 and got 11 % of it as his commission. What is the percentage he gets on his sales of first 8,800 ?

Q7. A person has to pay 9 % tax on first 5,500 he earned, for amount earned between 5,500 and 8,700 the tax percentage is different and is not known. For amount earned more than 8,700 the tax is 20 % . If a person earns 12,300 and pays 13 % of it as tax, what is the percentage of tax to be paid for amount earned between 5,500 and 8,700 ?

Q8. A shop offers a discount to all its customers on the basis of the value of the purchase. If the purchase is less than Rs 3,200, the customer gets a discount of 14 % . The customer gets 16 % discount on purchase between 3,200 and 6,300. The customer gets an discount of certain % on the purchase exceeding 6,300. If the total discount received is 1,520 which is equal to 16% of the purchase value , how much discount does the customer gets for amount exceeding 9,500 ?

Q9. An transport company charges 15 % of the cost of the value for the transportation of goods worth 3,800 or less. A cost of 15 % of 3,800 plus 16 % of amount excess to 3,800 but less than 7,300 is charged. If the value of goods is more than 7,300 the charges are 20 % on the value more than 7,300 . For a certain consignment the total transportation charge is Rs 1,870. What was the value of the consignment ?

Q10. In an chemistry experiment two liquids are to be mixed, Chemical A and Chemical B. The amount of Chemical B used depends upon the amount of chemical A used and on the following rules. If Chemical A is less than or equal to 6400 ml , Chemical B is equal to 15% of Chemical A. If the chemical A is more than 6,400 ml but less than 11,200 ml , chemical B is 15% of 6,400 + 7 % of the additional quantity of chemical A. If Chemical A is more than 11,200 then chemical B is equal to 15% of 6,400 + 7 % of next 4,800 + 18 % of the balance. If in such a experiment , chemical B is found to be 14 % of chemical A, what is the quantity of Chemical A used?

Q11. Three friends A,B and C donate 8%, 7% and 9% of their salary to charity in the given order. B's and C's salary is same and the difference in their donation is 74 Rs. The total donation by the three is 519 more than C's donation. What is the percentage of the total salary of the three donated ?

Q12. Three friends A,B and C donate 9%, 7% and X% of their salary to charity in the given order. The total salary of the three is 38,500 and 8 % of the total salary of the three goes to charity. The difference in salary of A and B is 12,200 while the difference in the charity by the two is 1,300. A's salary is the highest. How much percentage of salary did C donate ?

Q13. In an chemistry experiment two liquids are to be mixed, Chemical A and Chemical B. The amount of Chemical B used depends upon the amount of chemical A used and on the following rules. If Chemical A is less than or equal to 7,000 ml , Chemical B is equal to 16% of Chemical A. If the chemical A is more than 7000 ml but less than 13,500 ml , chemical B is 16% of 7,000 + 15 % of the additional quantity of chemical A. If Chemical A is more than 13,500 ml then chemical B is equal to 16 % of 7,000+ 15% of next 6,500 + 14 % of the balance. If in such a experiment , chemical B is found to be 15 % of chemical A, what is the quantity of Chemical A used? It is known that Chemical A was used was more than 15,000 ml.

Q14. A salesman gets 2 % commission on the sales of first 1,500 Rs. For sales more than Rs 1,500 but less 4500 he gets a commission of 5 % of the amount greater than 1,500. For sales is more than 4,500 he gets 4 % of the amount greater than 4,500. The salesman gets 328 as commission. What percent of the total sales did he get as commission ?

Q15. An Insurance company charges 2 % premium for the transportation of goods worth 36,400 or less. A premium of 2 % of 36,400 plus 7 % of amount excess to 36,400 but less than 41300 is charged. If the value of goods is more than 41,300 the premium charged is 6 % on the value more than 41,300 . For a certain consignment the total premium charged is Rs 1407. What was the value of the consignment?

Q16. 18 % of A plus 15 % B plus 19 % of C is equal to 17 % of sum of A, B and C. If $A - B = 500$ and $A - C$ is equal to 3400 what is the sum of the three numbers?

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MATCH THE WORDS IN SET A WITH THEIR MEANINGS IN SET B

SET A :

17. Revulsion 18. Usury, 19. Vantage, 20. Bilious, 21. Charlatan, 22. Emancipate,

SET B:

- A. False claim of special skill or knowledge on a subject .
- B. Relating to swimming.
- C. Sudden violent change of feeling.
- D. Very high interest rate.
- E. Lying on back to take sun bath.
- F. Position giving an advantage.
- G. Robust
- H. Person appealing to emotions.
- I. To precede.
- J. To free someone from restrictions or bondage.
- K. Suffering from indigestion
- L. Foolish and daring.

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ANSWERS :

Ans 1. 20 % of 3800 = 760,
25 % of (9000-3800) = 1300.
Let the amount greater than 9000 be X.
 $760 + 1300 + 30X/100 = 4160$. Or $30X/100 = 4160 - 760 - 1300$.
 $30X/100 = 2100$ so $X = 7000$.
So total sales = $9000 + 7000 = 16000$.
 $16000 * y/100 = 4160$.
So $y = 4160 * 100 / 16000 = 26\%$

Ans 2. $4700 * 20/100 = 940$.
 $(7300 - 4700) * 25/100 = 650$. $650 + 940 = 1590$.
Let the income be X. $1590 + (X - 7300) 30/100 = 24 X/100$. $1590 - 2190 + 30X/100 = 24X/100$.
 $6X/100 = 600$, $X = 10000$

Ans 3. $4500 * 10/100 = 450$, $3900 * 15/100 = 585$,
Discount received on last slab = $2 * 450 = 900$.
Purchase value of the last slab = $900 * 100/20 = 4500$.
Total Purchase = $8400 + 4500 = 12900$. Total discount = $450 + 585 + 900 = 1935$.
So the required value = $1935 * 100 / 12900 = 15\%$.

Ans 4. $5000 * 10/100 = 500$,
 $(9100 - 5000) * 12/100 = 492$.
Let the amount greater than 9100 be X. So premium charged on
 $X = 20X/100$.
Total premium = 1932
so $500 + 492 + 20X/100 = 1932$
 $20X/100 = 940$
 $X = 940 * 100 / 20 = 4700$
So total value of the consignment = $9100 + 4700 = 13,800$

Ans 5. Chemical B used for first 4500 ml of chemical A = $4500 * 8/100 = 360$
Chemical B used for next 3900 ml of chemical A = $3900 * 12/100 = 468$
Let the chemical A used in excess to 8400 be X so the corresponding chemical B used will be $16X/100$
Total chemical A used = $8400 + X$
Chemical B is 12 % of $8400 + X$ so it is equal to $(8400 + X) * 12/100$
 $(8400 + X) * 12/100 = 360 + 468 + 16X/100$
 $1008 + 12X/100 = 828 + 16X/100$
 $180 = 4X/100$
so $X = 4500$
So chemical A used = $8400 + 4500 = 12,900$.

Ans 6. Let the commission received for sales less than 8800 be X %

For sales between 8800 to 12000 he gets 12 % = $(12000 - 880) \cdot 12 / 100 = 384$

For sales between 15600 and 12000 he gets 15% = $(15600 - 12000) \cdot 15 / 100 = 540$

Total commission = $15600 \cdot 11 / 100 = 1716$

so we get $8800 \cdot X / 100 + 384 + 540 = 1716$

$88X = 792$ so $X = 9$

Ans 7. Tax on first 5500 = $5500 \cdot 9 / 100 = 495$

Let the tax for amount earned between 5500 to 8700 be X %

Tax for amount earned between 12300 and 8700 = $(12300 - 8700) \cdot 20 / 100 = 720$

Total Tax = $12300 \cdot 13 / 100 = 1599$

$495 + (8700 - 5500)X / 100 + 720 = 1599$

$3200 \cdot X / 100 = 384$

so $X = 12$

Ans 8. Discount for the first 3200 = $3200 \cdot 14 / 100 = 448$

Discount for purchase between 3200 to 6300 = $3100 \cdot 16 / 100 = 496$

Discount received = 1520 which is 8 % of purchase value.

So purchase value = $1520 \cdot 100 / 16 = 9500$

so the amount greater than 6300 = $9500 - 6300 = 3200$

Discount received on 3200 is equal to $1520 - 448 - 496 = 576$

So the discount % = $3200 \cdot X / 100 = 576$

so $X = 57600 / 3200 = 18$

Ans 9. $3800 \cdot 15 / 100 = 570$

for next 3500 ($7300 - 3800$) the charges are $3500 \cdot 16 / 100 = 560$

Let the value of the goods in excess of 7300 be X

so we get $570 + 560 + 20X / 100 = 1870$

$20X / 100 = 740$

so $X = 74000 / 20 = 3700$

So total value of the consignment = $3700 + 7300 =$

11000

Ans 10. 18000

ml

Ans 11. As B's salary and C's salary is same, Let the salary be X, Y and Y

Donation by the three = $8X / 100, 7Y / 100, 9Y / 100$.

$9Y / 100 - 7Y / 100 = 74$

so $2Y / 100 = 74$

so $Y = 7400 / 2 = 3700$

so B's donation = $7 \cdot 3700 / 100 = 259$

and C's donation = $9 \cdot 3700 / 100 = 333$

Total donation by the 3 is $259 + 333 = 592$

let donation by A be A so we get $A + 259 + 333 = 852$ so $A = 260$

$8X / 100 = 260$ so $X = 3250$

Total salary of the three = $3250 + 3700 + 3700 = 10650$

Total donation by the three = $259 + 333 + 260 = 852$

so the percentage of the total salary donated = $852 \cdot 100 / 10650 =$

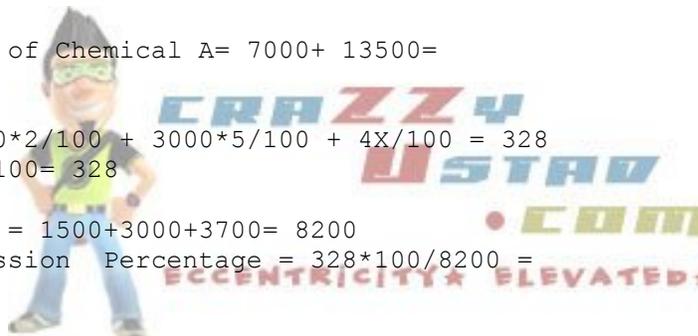
8 %

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Ans 12. Let the salary be A, B and C
The donations by A and B = $9A/100$, $7B/100$
Total salary = 38500....i
Total Donation = $38500 \times 8/100 = 3080$ii
Difference in salary of A and B, $A - B = 12200$iii
Difference in donation by A and B : $9A/100 - 7B/100 = 1300$
Or $9A - 7B = 130000$iv
solving iii and iv we get $A = 22300$ and $B = 10100$
using i we get Salary of C = $38500 - 22300 - 10100 = 6100$
A's donation = $22300 \times 9/100 = 2007$
B'S donation = $10100 \times 7/100 = 707$
Using ii we get C's donation as $3080 - 2007 - 707 = 366$.
So C donate 366 and his salary is 6100
so percentage of his donation = $36600/6100 = 6$
%

Ans 13. $16 \times 7000/100 + 15 \times 6500/100 + X \times 14/1000 = (13500 + X) \times 15/100$
 $1120 + 975 + 14X/100 = 2025 + 15X/100$
 $70 = X/100$
so $X = 7000$
So quantity of Chemical A = $7000 + 13500 = 20500$

Ans 14. $1500 \times 2/100 + 3000 \times 5/100 + 4X/100 = 328$
 $30 + 150 + 4X/100 = 328$
 $X = 3700$
Total sales = $1500 + 3000 + 3700 = 8200$
Total Commission Percentage = $328 \times 100/8200 = 4$



Ans 15. 46900

Ans 16. $18A/100 + 15B/100 + 19C/100 = 17(A+B+C)/100$
 $A - B = 500$ or $B = A - 500$
 $A - C = 3400$ or $C = A - 3400$
 $18A/100 + 15(A - 500)/100 + 19(A - 3400)/100 = 17(A + A - 500 + A - 3400)/100$
 $18A + 15A - 7500 + 19A - 64600 = 17(3A - 3900)$
 $52A - 72100 = 51A - 66300$
 $A = 5800$
 $B = 5800 - 500 = 5300$
 $C = 5800 - 3400 = 2400$
sum of the three numbers = $5800 + 5300 + 2400 = 13500$

Ans 17= C, Ans18= D, Ans 19= F , Ans 20= K, Ans 21= A, Ans 22= J