21. **Nena has applied for employment in the next three different countries namely: Hongkong; Malaysia and Brunei. In Hongkong the monthly salary in HK $500; Malaysia Mal $300 and Brunei $200 consider the following:**

       1 HK $ = P2.90
       1 Br $ = P 12.15
       1 Mal $ = P 8.40

    Which country has the best offer?
    1. Hongkong   2. Brunei   3. Malaysia
    4. Hongkong – Brunei   5. All

Solution: Which is the best offer in pesos?
HK = 500 x 2.90 = P 1,450
Mal = 300 x 8.40 = P 2,520
Br = 200 x 12.15 = P 2,430

22. **Which of the following commodities has the least increase U.S. $ per pound from 1987 – 1990.**

    1. copper from 0.63 to 1.14
    2. aluminum from 0.62 to 0.63
    3. nickel from 1.72 to 3.55
    4. zinc from 0.43 to 0.68
    5. lead from 0.21 to 0.30

Solution: Simple Decimal Subtraction, Find the least number
1. copper: 1.14 - 0.63 = 0.51
2. aluminum: 0.63 - 0.62 = 0.01
3. nickel: 3.55 - 1.72 = ??
   (Tip: you canopt whether to solve this or not, by just knowing the number, you can see that the result would be much greater than that of aluminum, 0.01, we are looking for the least. This would save you time.)
4. zinc from 0.68 - 0.43 = (Much larger than 0.01)
5. lead from 0.21 to 0.30 = (Much larger than 0.01)

23. Which of the following is the biggest?

1. 41.2 meters   2. 4,120 cm   3. 0.0412 km.
4. 41,200 mm.   **5. all are equal**

Solution: Conversion of units.

Note: 1 kilo units = 1,000 units
         1 centi units = 1/100 units
         1 milli units = 1/1000 units

1. 41.2 meters
2. 4,120 cm x 1/100 m/cm = 41.2 meters
3. 0.0412 km x 1000 m/km = 41.2 meters
4. 41,200 mm x 1/1000 m/mm = 41.2 meters

24. A family budget provides that the monthly outlaws for food and house is P 1,810.00. If the amount spent for food is three times that of the rent, how much is the monthly rental?

1. P460.00   2. P920.00   3. P1,560.00
4. P452.50   5. none of these

Solution: Simple Algebra.

Budget for Food and House Rental = P 1,810
X = Budget for food
Y = Budget for house rental
X + Y = P 1,810, Solve for Y
Relation: X = 3Y
(3Y) + Y = 1,810
4Y = 1,810
Y = 452.50

25. After driving 3 ½ hours, a motorist covered 120 km. At this rate, how long will it take him to drive 360 km.?

1. 9 ½   **2. 10 ½**   3. 11 ½
4. 12 ½   5. 13 ½

26. Mrs. Renoso is planning to buy curtains for their new house. She will need 23 floor length pieces, each piece 2 meters and 50 cm. Long. How many meters should she buy.

1. 37 ½   2. 47 ½   **3. 57 ½**
4. 67 ½   5. 57 ¼

27. **An employee spends about P1,330.00 a month. This sum is 70% of his monthly salary. How much does he receives a month?**

    1. P1,900.00   2. P2,265.00   3. P2,900.00
    4. P2,290.00   5. P2,000.00

If a and b are any two positive real numbers, then;

    1. –b a+b   2. b-aa+b   3. a-ba+b
    4. a-b a+b   5. none of these

Tip: The question must be an error, you can magic your answer here or you can guess what was the missing question. My guess is that which would give a result of positive number by which both 3 and 4 would qualify, if asked the opposite question, which would return a negative value, both 1 and 2 would also qualify.

28. **Which pair of numbers below has 120 as a product?**

    1. 7 & 16   2. 15 & 8   3. 18 & 5
    4. 25 & 4   5. none of these

29. **A certain number is doubled and then divided by 8. If after subtracting 4 from this result, one gets 16, the original number is:**

    1. 32   2. 48   3. 64
    4. 80   5. 70

Solution: Simple Algebra.
$$(x \times 2 \div 8) - 4 = 16$$
$$\frac{x}{4} = 16 + 4$$
$$x = 20 \times 4 = 80$$

30. The numerator of a fraction is 4 less than its denominator, if 3 is added both the numerator and denominator, the resulting number is ¾. What is the original fraction?

1. 8/14   **2. 9/13**   3. 9/12
4. 10/13   5. 8/13

Solution: Algebra and fraction. Find $\dfrac{x-4}{x}$.

Tip: By inspection only choice 2 would fit the description of the fraction, which is the numerator is less than 4 than the denominator. Choice 2 is the obvious answer.

Alternate Solution (Check):

$$\frac{x-4+3}{x+3} = \frac{3}{4}$$

From the fraction, we have 2 equations:

x - 1 = 3y and x + 3 = 4y

Substitute y in equation 1: y = (x – 1)/3 to equation 2.

$$x + 3 = \frac{4(x-1)}{3}$$

$$3(x+3) = 4(x-1)$$

$$3x + 9 = 4x - 4$$

$$9 + 4 = x$$

$$x = 13$$

Therefore: $\dfrac{x-4}{x} = \dfrac{9}{13}$

31. Each box of ballpen contains 24 pieces. If an employee in an office given 3 ballpens. How many boxes will be needed for 168 employees?

1. 17   2. 21   3. 22
4. 25   5. 31

Solution: 8 employees per box. 168 employees divided by 8 employees per box = 21 boxes

32. An employee who receives P306.00 each payday saves P1.50 of every P9.00 of his earnings. If the employee is paid two times a month, how much he would save after four months?

1. P144.00   2. P204.00   3. P334.00
4. P408.00   5. P308.00

Solution.

$$savings\ after\ 4\ months = P\ 306\ per\ payday \times \frac{P\ 1.50\ savings}{for\ every\ P\ 9.00} \times 2\ paydays\ per\ month \times 4\ months$$

$$= 306 \times \frac{15}{90} \times 2 \times 4$$

$$= 306 \times \frac{30}{90} \times 4$$

$$= 306 \times \frac{1}{3} \times 4$$

$$= 102 \times 4$$

$$= 408$$

33. If a can holds ¾ of a liter of gasoline. How many liters will 1 ½ dozens at the same size hold?

1. 10.8   2. 12.2   3. 13.8
4. 13.5   5. 14.5

34. The ratio of males to females in an organization is M:F. How many males are there if there are T females?

1. (M x T) + F   2. (F x T) + M   3. T + (F-M)
4. FT / M   5. MT / F

Solution: Solve for x:

$$\frac{M}{F} = \frac{x}{T}$$

$$x = \frac{MT}{F}$$

35. Maria was born November 23, 1958. How old was she last April 23, 1980?

1. 20 yrs. & 9 months   4. 22 yrs. & 7 months
2. 22 yrs. & 5 months   5.none of these
3. 21 yrs. & 5 months

36. When any number is divided by 20, the largest remainder that can be attained is:

1. 5   2. 10   3. 19
4. 21   5. 15

37. There are 115,000 hectares of land for cotton production. What should be the average yield in tons per hectare to produce a total of 138,000 tons of cotton?

1. 8.0   2. 1.2   3. 1.23
4. 2.3   5. 2.1

38. An employee who receives P296.00 each payday, put P1.00 out of P8.00 into a special fund. How much does he put into that fund?

1. P26.00   2. P29.00   3. P20.00
4. P24.00   5. P37.00

Beware! This is a very simple problem but would take time solving without calculator. Practice these types of problems; this should be a bonus to you once you have mastered the problem. The quick solution of this is:

$$296 \times \frac{1}{8} = 37$$

Practice Problem 33.

39. The United Arab Emirates has reduced its daily oil production by 80,000 barrels from 1.7 million barrels. Find its daily production in million barrels.

1. 0.9   2. 1.5   3. 1.62
4. 1.6   5. 1.2