2ⁿᵈ Edition
GHANA TEACHER LICENSURE EXAMINATION (GTLE)
Numeracy Objectives
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Note: 1

To solve word problems

● Read the information given carefully.

● Choose a letter to represent unknown quantities you have to find. Try to use the information to write each unknown in terms of this letter.

● Use the information given to find two equal expressions. Write the expressions as an equation.

● Solve the equation you have formed and use your solution to answer the question.

Note: 2

If x represent an unknown number, then

- 5 more than the number => x + 5

- 3 less than the number   => x – 2

- 8 times the number   => 8x

- Half the number   => x/2

- 4 times the number is subtracted from 6 and the result is multiplied by 3

$$\Rightarrow 3(6 - 4x)$$

- 2 less than a number and the result is five times the number

$$\Rightarrow x - 2 = 5x$$

- 4 more than half the number and the result is 6

$$\Rightarrow x/2 + 4 = 6$$

- Three more than five times the number is two less than seven times the number

$$\Rightarrow 5x + 3 = 7x - 2$$

Instruction:

Read and evaluate all four answer choices before circling the correct or best answer.

In this material, I have provided hints or guides to solve each of the following questions.
Well then, let's get started.

1. The number of rooms at Hotel G is 10 less than twice the number of rooms at Hotel H. If the total number of rooms at both Hotels is 425, what is the number of rooms at Hotel G?

   Hint: Hotel G and H be g and h respectively

   G = 2h − 10, H = h, total = 425

   ➢   (2h − 10) + h = 425, solve for h and subtract from 425 to get G.

(a) 140

(b) 180

(c) 240

(d) 280

<u>True Answer : 280</u>

2. Look at this Series; 14, 28, 20, 40, 32, 64, ...

   What number should come next?

   Hint: 6, 6x2=12, 12x2... These should be added to the 1st to get the 3rd and to the 3rd to ge the 6th ...

(a) 52

(b) 56

(c) 96

(d) 128

True Answer : 56

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3. Look at this Series: 31, 29, 24, 22, 17, ...

   What number should come next?

   Hint: The differences are 2 and 5

(a) 15

(b) 14

(c) 13

(d) 12

4. In an election between 2 candidates, one got 55% of the total valid votes, 20% votes were invalid. If the total number of votes was 7500, what was the number of valid votes that the other candidate got?

    Hint: 20 ÷100 × 7500 = 1500

    ➢   1500 – 7500 = 6000

    ➢   55 ÷ 100 × 6000 = 3300

    ➢   6000 – 3300 = 2700

(a) 2800

(b) 2700

(c) 3300

(d) 2500

True Answer : 2700

5. 4 adults consumed food costing $60 for 3 days. For the same food cost, what would be

the cost of food consumed by 7 adults for 5 days?

Hint: 4 adults = $60

➤ 7 adults = 7/4 × 60 = 105

➤ 105 (ans.) ÷ 3 (days) × 5 (days) = $175

(a) $300

(b) $175

(c) $105

(d) $100

<u>True Answer : $175</u>

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6. Look at this Series; 22, 21, 23, 22, 24, 23, ... What number should come next?

Hint: The 1st, 3rd,5th , 7th ... increase by 1

(a) 22

(b) 24

(c) 25

(d) 26

7. For this Series of alphanumeric fractions: A/2, B/4, C/6, D/8. ?, ?, What should be the next fraction?

Hint: Observe carefully

(a) E/8, F/10

(b) E/12, F/14

(c) E/10, F/12

(d) D/10, E/^{1}

True Answer : E/10, F/12

8. Look at this Series: 7, 10, 8, 11, 9, 12, ...
   What number should come next?

   Hint: The 1st, 2nd, 3rd, 4th, increase by 1

(a) 7

(b) 10

(c) 12

(d) 13

<u>True Answer : 10</u>

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9. 36 men can complete a piece of work in 18 days. In how many days will 27 men complete the same work

    Hint: 36 men = 18 days

    27 men, (*if less more divides*)

    36/27 × 18 = 24

(a) 24

(b) 22

(c) 18

(d) 12

<u>True Answer : 24</u>

10. 4 mat-weavers can weave 4 mats in 4 days. At the same rate, how many mats would be woven by 8 mat-weavers in 8 days?

Hint: 4 mat-weavers = 4 mats

8 mat-weavers (*if more less divide*)

➢ 8/4 × 4 = 8

➢ 8 (ans.) ÷ 4 (days) × 8 (days)

(a) 4

(b) 8

(c) 12

(d) 16

<u>True Answer : 16</u>

11. A cubical block of metal weighs 6 pounds. How much will another cube of the same metal weigh if its sides are twice as long?

Hint: Volume = l × b × h

➢ 1 × 2 × 3 = 6

➢ (1×2) × (2×2) × (3×2) = 48

(a) 48

(b) 32

(c) 24

(d) 16

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11. A P.E. teacher orders 30 new jersey for the school football team. If each of the jersey cost GH 3.99, what is the total cost of these jerseys.

   Hint: multiply 30 by 3.99

(a) GH 119.70

(b) GH 219.70

(c) GH 130.67

(d) GH 230.67

13. A store pays GH 82.95 for a microwave and marks the price up by 20%. What is the new price?

Hint: 20/100 × 82.95 = 16.59

   ➤   16.59 + 82.95 = 99.54

(a) GH 17.99

(b) GH 82.95

(c) GH 99.54

(d) GH 100.94

<u>True Answer : GH 99.54</u>

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14. Of the following fractions, which of them is greater than 1/2?

Hint: 2/1 is greater than ½ but is not a fraction because any number out of 1 is not a fraction.

➢   Divide using the radical sign (long division method) to get the answer.

(a) 2/1

(b) 4/7

(c) 4/9

(d) 5/11

(e) <u>True Answer : 4/7</u>

15. In a class of 78 students. 41 are taking Journalism, 22 are taking Public Relations.

Of the students taking Journalism or Public Relations, 9 are taking both courses. How many students are not students are not enrolled in either course?

Hint: J is Journalism and P is Public Relations
  ➤   78 - [(41 − 9) + (22 − 9) + 9] = 54
  ➤   (J′ n P′) = 24 − 9 = 15

(a) 6

(b) 15

(c) 24

(d) 33

<u>True Answer : 15</u>

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16. In a class of 24 pupils, 4 need additional support. What fraction of the class in lowest term needs additional support?

Hint: Simplify 4/24

(a) 1/6

(b) 1/8

(c) 1/4

(d) 1/2

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17. There are 3 apples and you take away 2. How many do you have?

Hint: what you have with you is the answer.

(a) 1

(b) 2

(c) 3

(d) 4

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18. What is the average (arithmetic mean) of all the multiples of ten from 10 to 190 inclusive?

Hint: Add all the numbers and divide by the number of elements.

➢ $(10 + 20 + 30 \dots + 190) \div 19 = 100$

(a) 90

(b) 95

(c) 100

(d) 105

True Answer : 100

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19. If an object travels at five feet per second, how many feet does it travel in one hour

Hint: 60seconds = 1minutes, 60minutes = 1hour

➢ 5 × 60 × 60 = 18000

(a) 30

(b) 300

(c) 1800

(d) 18000

True Answer : 18000

20. Look at this Series; D-4, F-6, H-8, J10, ?, ?. What pair of letters/numbers should come next?

Hint: Observe carefully

(a) K-12, M-13

(b) L-12, M-14

(c) L-12, N-14

(d) K-12, M-14

<u>True Answer : L-12, N-14</u>

21. Yaw, Kofi and Ama shared the profit they earned in a month from a joint business in the ratio 2:4:3 respectively. If Ama and Kofi together got a total of GH 42.00. Find the profit earned in the month.

Hint: First find either Kofi or Ama's profit in 42 then use the result to calculate the month.

 Note: 3 + 4 = 7

➢   4/7 × 42 = 24 which is Kofi's profit. Since we are finding for the whole month, we shall use Kofi's ratio of the three of them against his profit.

➢   9/4 × 24 = 54

(a) GH 50.40

(b) GH 54.00

(c) GH 62.00

(d) GH 68.00

True Answer : GH 54.00

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22. A woman bought 210 oranges for 65 Ghanaian Cedis. She sold all of them at 3 for 2 cedis. How much profit did she make?

Hint: 210 ÷ 3 × 2 = 140

➢   140 − 65 = 75

(a) 35 cedis

(b) 45 cedis

(c) 65 cedis

(d) 75 cedis

True Answer : 75 cedis

23. Mark is 30 years old. Yaw is half as old as Mark. Paul is 10 years older than Yaw.

How old is Paul?

Hint: Mark = 30,

Yaw = 30/2 = 15,

Paul is 10 + Yaw = 25.

(a) 30 years

(b) 25 years

(c) 20 years

(d) 15 years

True Answer : 25 years

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24. If the ages of ten pregnant women in a maternity clinic are 26,23,24,27,26,21,22,25,23,23. Find the mean age.

Hint: Add all their ages and divide by the number of elements.

(a) 34 years

(b) 14 years

(c) 23 years

(d) 24 years

<u>True Answer : 24 years</u>

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25. A man has 6p sheep and 5q goats. He sells 3p sheep and 2q goats. How many animals are left after the sales?

Hint: 6p - 3p = 3p and 5q - 2q = 3q

(a) 3p - 3q
(b) 3p + 3q
(c) 9p - 5q
(d) 9p + 9q

<u>True Answer : 3p + 3q</u>

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26. Express 3m and 24cm in kilometers.

Hint: 1m = 100cm, 3m = 300cm

➢   300cm + 24cm = 324cm

➢   1km = 100000cm

➢   324 ÷ 100000 = 0.00324km

(a) 3.24 km

(b) 0.00324 km

(c) 0.324 km

(d) 32.4 km

True Answer : 0.00324 km

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27. A tank holds 240litres of water. How much water is in the tank when it is full?

(a) 240 litres

(b) 192 litres

(c) 132 litres

(d) 60 litres

True Answer : 192 litres

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28. The least number in a set of real numbers is greater than 24 and the highest is less than 30. Which of the following is the best interpretation of this statement?

Hint: x is greater than 24 and less than 30

(a) 24 > x > 30

(b) 24 < x = 30

(c) 24 > x < 30

(d) 24 < x < 30

<u>True Answer : 24 < x < 30</u>

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29. The sum of the ages of Kweku and Kojo is 30 years. Kweku is 4 years older than Kojo. How old is Kojo?

Hint: let Kweku be x and Kojo be y

$x + y = 30$ _____ (1), $y + 4 = x$ _____(2)

Put eqn. (2) into eqn. (1) and solve for y.

(a) 19 years

(b) 17 years

(c) 13 years

(d) 11 years

<u>True Answer : 13 years</u>

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30. Simplify - 27 + 18 - (10 - 14) - (-2).

(a) - 3

(b) - 7

(c) - 11

(d) - 35

31. An amount of money was shared between Kofi and Ama in the ratio 3 : 5 respectively. If Ama received GHc 650.00, What was Kofi's share?

Hint: To get Kofi's share, first find the original amount and subtract Ama's share from the original to get Kofi's share.

➢   8 ÷ 5 × 650 = 1040

➢   1040 – 650 = 390.00

(a) GHc 390.00

(b) GHc 550.00

(c) GHc 1040.00

(d) GHc 743.00

True Answer : GHc 390.00

32. Which of the following statements is TRUE about natural numbers?

(a) All prime numbers are odd

(b) Composite numbers have more than twodivisors

(c) The sum of any two natural numbers areodd

(d) Even numbers are not divisible by 2

True Answer : Composite numbers have more than two divisors

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33. A car left Nsawam 9:45 am. It arrived in Kumasi in 3 hours 17 minutes later. At what time did the car arrived in Kumasi.

Hint: Add 3hrs 17m to 9:45 am

(a) 12 : 02 pm

(b) 12 : 52 am

(c) 1 : 02 am

(d) 1 : 02 pm

True Answer : 1 : 02 pm

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34. There are p boys and q girls in a classroom. Each person had 2 textbooks. Which of these expressions represents the total number of textbooks carried to the classroom?

(a) 2 (p + q)

(b) 2 + (p + q)

(c) 2p + q

(d) 2pq

True Answer : 2 (p + q)

35. How many degrees does a minute hand of a clock turn through from 6 : 20 am to 7 : 00 am the same day?

Hint: Every 5minutes is 30 degrees

(a) 120 degrees

(b) 320 degrees

(c) 180 degrees

(d) 240 degrees

True Answer : 240 degrees

36. Mansah obtained 150 marks out of 240 marks in a Mathematics test. What was her percentage score?

Hint: The word out of means 150 over 240

➢ $150 \div 240 \times 100 = 62.50\%$

(a) 33.33 %

(b) 36.50 %

(c) 41.67 %

(d) 62.50 %

<u>True Answer : 62.50 %</u>

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37. What is the next tern in the pattern ? $4 - 4 = 0$, $4 - 3 = 1$, $4 - 2 = 2$, $4 - 1 = 3$, $4 - 0 = 4$, __ - __ = 5.

(a) $4 - (-1) = 5$

(b) $4 - (-2) = 6$

(c) $4 - 1 = 3$

(d) $4 - 5 = -1$

<u>True Answer : 4 - (- 1) = 5</u>

38. It takes 15 men an average of 48 days to weed a plot of land. How many men can weed the same plot of land in 16 days, if they work at the same rate?

Hint: 15 men = 48 days

➢ 48/16 × 15 = 45

(a) 45

(b) 32

(c) 18

(d) 5

<u>True Answer : 45</u>

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39. A company has 200 employees. Thirty nine percent of them work in the machine room and 32% are engaged in distribution of goods. How many of the employees are engaged in other duties apart from these two?

Hint: subtract the two percentage from 100. The result percent of 200 is the answer.

➢   100 − (39 +32) = 29

➢   29 ÷ 100 × 200 = 58

(a) 45

(b) 56

(c) 58

(d) 71

<u>True Answer : 58</u>

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40. Six hundred copies of a book have to be packed into boxes. Each box can hold 15 of the books. Which one of the following operations could be used to find the number of boxes needed?

(a) Add 15 to 600

(b) Divide 600 by 15

(c) Multiply 600 by 15

(d) Subtract 15 from 600

<u>True Answer : Divide 600 by 15</u>

41. A boy used two-thirds of his weekly savings to buy a textbook. If he realized that he has GH 10.00 left, how much was the weekly savings.

Hint: By inspection, 2/3 of 30 is 20

➢ 30 – 20 = 10 which is the remaining.

(a) GH 20.00

(b) GH 30.00

(c) GH 40.00

(d) GH 60.00

True Answer : GH 30.00

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42. Some pages in a book on a bookshelf are missing so that page 21 is now followed immediately by page 43. How many pages are missing?

Hint: Subtract 21 from 43

(a) 20

(b) 21

(c) 22

(d) 43

43. Eleven more than 2 times Jona's age is equal to 59. How old is Jona?

Hint: Let Jona's age be x

➢ 2x + 11 = 59 solve for x.

(a) 23 years

(b) 24 years

(c) 67 years

(d) 35 years

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44. Mr. Adaber bought three items priced at GH 65.50, GH 36.45 and GH 15.78. He paid with three GH 50.00 notes. How much change did he received?

Hint: 3 × 50 = 150

Add the prices and subtract from 150

(a) GH 32.27

(b) GH 32.73

(c) GH 33.27

(d) GH 33.73

<u>True Answer : GH 32.27</u>

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45. Dora has a bag containing 3 blue tennis balls. Jennifer has a bag containing 2 black tennis balls. Their balls are all identical except for colours. The two girls put the balls in one bag. If a ball is picked at random from the bag, what is the probability that the ball is black?

Hint: The balls are now in one bag and so we have 5 as the sample space.

Black is 2 so, 2/5

(a) 1/10

(b) 1/5

(c) 2/5

(d) 3/5

<u>True Answer : 2/5</u>

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46. If you take away the sum of 248.25 and 63.17 from 890.45, what is left?

(a) 579.03

(b) 589.03

(c) 589.13

(d) 689.03

True Answer : 579.03

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47. The population of two communities are 1.8705 x 106 and 9.00846 x 105.

Calculate the total population of the two communities.

(a) 277,145

(b) 2,771,365

(c) 2,972,000

(d) 10,880,000

True Answer : 2,771,365

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48. Dartey recorded a mean score of 24 on five tests. What should she score on the sixth test to bring her mean score up to 26?

(a) 30

(b) 32

(c) 36

(d) 40

<u>True Answer : 36</u>

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49. A school wants to fence its rectangular playing field measuring 118m by 92m with wire mesh. How many meters of wire mesh will be needed to complete the fencing?

Hint: Perimeter = 2(l ×b)

➢ 2(118 × 92)m = 420m

(a) 200 m

(b) 410 m

(c) 420 m

(d) 440 m

<u>True Answer : 420 m</u>

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50. If the population of a village increases by 97, it will reach at least 4,050 people. Which one of

the following inequalities represents the statement correctly?

(a) P + 97 < 4,050

(b) P + 97 = < 4,050

(c) P + 97 = < 050

(d) P + 97 > 4,050

True Answer : P + 97 = < 4,050

Good Luck!!!