GHS Sorted Past Paper - MC
S1-04 Linear Equations in One Unknown

1. [20 - 21 S1 Final Exam - 05] (89%)

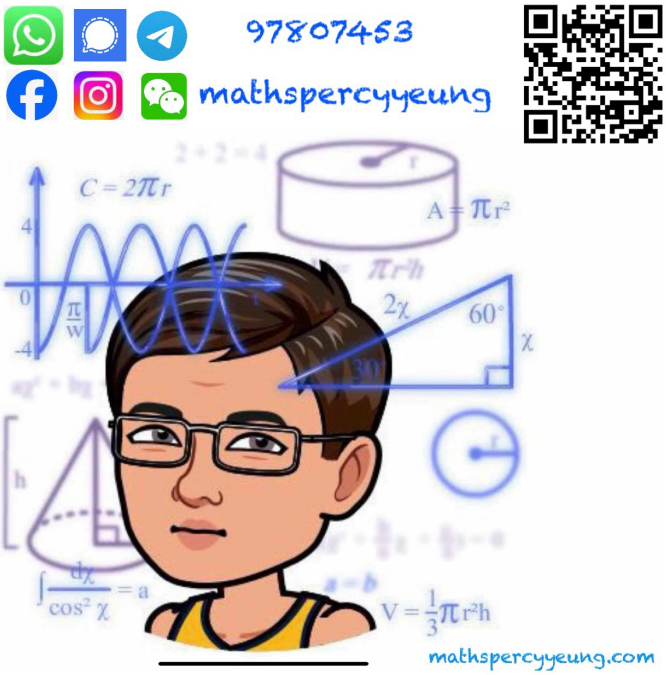
5. Solve $3(5 + 3x) = -12$.

A. $x = \frac{1}{3}$

B. $x = -\frac{1}{3}$

C. $x = -3$

D. $x = -9$



2. [20 - 21 S1 Final Exam - 15] (60%)

15. Solve $\frac{2(1-8x)}{5} - \frac{2-3x}{3} = x$.

A. $x = 2$

B. $x = \frac{1}{3}$

C. $x = -\frac{1}{12}$

D. $x = -12$

3. [20 - 21 S1 Mid-year Exam - 07] (73%)

7. Peter is 5 times as old as his daughter now. After 7 years, Peter will be 3 times as old as his daughter. What is the present age of Peter?

A. 7

B. 14

C. 35

D. 42

4. [21 - 22 S1 Final Exam - 12] (61%)

12. Cherie is x years old now. Eric is 2 years older than Cherie. After 44 years, Eric's age will be three times the present age of Cherie. Which of the following equations can be used to find the value of x?

A. $x - 46 = 3x$
B. $x + 46 = 3x$
C. $44(x + 2) = 3x$
D. $3(x + 2) = 44x$

5. [21 - 22 S1 Mid-year Exam - 09] (85%)

9. If $3 - 4x = 5 + 2x$, then

A. $x = -4$.
B. $x = -1$.
C. $x = -\frac{1}{3}$.
D. $x = 1$.

6. [21 - 22 S1 Mid-year Exam - 15] (70%)

15. If $3(y - 1) - (2 - y) = 3$, then

A. $y = \frac{3}{2}$.
B. $y = 2$.
C. $y = 3$.
D. $y = 4$.

7. [22 - 23 S1 Final Exam - 04] (69%)

4. Which of the following is a linear equation in one unknown?

A. $x-2$
B. $x^2-3=1$
C. $x=3-2y$
D. $7+\frac{2x}{9}=42$

8. [22 - 23 S1 Final Exam - 13] (69%)

13. The sum of the present ages of Donald and John is 119. Seven years ago, the age of Donald was two times that of John. Find the present age of John.

A. 42
B. 44
C. 46
D. 77

9. [22 - 23 S1 Mid-year Exam - 06] (76%)

6. The solution of $8-5x=3(x+4)$ is

A. $x=-2$.
B. $x=-\frac{1}{2}$.
C. $x=\frac{5}{2}$.
D. $x=10$.

10. [22 - 23 S1 Mid-year Exam - 14] (94%)

14. There are x boys in a classroom. The number of girls in the classroom is 10 less than four times that of boys. If there are 35 students in the classroom, which of the following equations can be used to find the value of x?

A. $x - 10 = 35 + 4x$
B. $x + 4x = 35 - 10$
C. $x + (4x - 10) = 35$
D. $4x - 10 = 35 + x$

11. [23 - 24 S1 Final Exam - 04] (69%)

4. Which of the following is an equation with root 25?

A. $\frac{x+45}{5}=\frac{x}{5}-1$

B. $-\frac{5-x}{4}=\frac{x}{5}+1$

C. $\frac{x+20}{9}=\frac{x}{5}$

D. $\frac{x-20}{9}=-\frac{x}{5}$

12. [23 - 24 S1 Final Exam - 15] (72%)

15. The price of a notebook is \$4 more than twice the price of a pen. If Darren pays \$78 for 2 notebooks and 3 pens, find the total price for buying a notebook and a pen.

A. 10
B. 24
C. 34
D. 48

13. [23 - 24 S1 Mid-year Exam - 06] (99%)

6. Solve the equation $2x-9=5$.

A. $x=7$
B. $x=2$
C. $x=-2$
D. $x=-7$

14. [23 - 24 S1 Mid-year Exam - 07] (81%)

7. 100 is the root of

A. $\frac{4s}{5}+16=64$.

B. $\frac{4s}{5}-4=64$.

C. $4\left(\frac{s}{5}-4\right)=64$.

D. $4\left(\frac{s-4}{5}\right)=64$.

15. [23 - 24 S1 Mid-year Exam - 15] (82%)

15. Solve the equation $4[(x+4)-(2x-1)]=200$.

A. $x=-50$
B. $x=-45$
C. $x=45$
D. $x=50$

16. [23 - 24 S1 Mid-year Exam - 16] (89%)

16. A bookstore sells half of the books in the first hour and 20 books are sold in the second hour and $\frac{1}{3}$ of the books are left. If N is the number of books that the bookstore originally has, which of the following equations can be used to find the value of N?

A. $N-\frac{N}{2}-20=\frac{N}{3}$

B. $N-\frac{N}{2}+20=\frac{N}{3}$

C. $N-\frac{N}{3}+20=\frac{N}{2}$

D. $\frac{N}{2}+\frac{N}{3}-20=N$

17. [24 - 25 S1 Final Exam - 04] (63%)

4. The root of the equation $\frac{1}{5}+\frac{n}{4}=\frac{n}{2}-\frac{1}{5}$ is

A. $-\frac{8}{5}$.

B. $-\frac{4}{5}$.

C. $\frac{4}{5}$.

D. $\frac{8}{5}$.

18. [24 - 25 S1 Final Exam - 14] (80%)

14. The length of a rectangle is 5 cm longer than twice its width. If the perimeter of the rectangle is 82 cm, what is the width of the rectangle?

A. 12 cm

B. 18 cm

C. 24 cm

D. 29 cm

19. [24 - 25 S1 Mid-year Exam - 07] (71%)

7. Solve the equation $x-4=\frac{2x}{3}$.

A. $x=-12$

B. $x=4$

C. $x=6$

D. $x=12$

20. [24 - 25 S1 Mid-year Exam - 13] (64%)

13. Which of the following equations has –11 as its root?

A. $\frac{2x+5}{3}=-5$

B. $\frac{3x+4}{2}=-x$

C. $\frac{x-4}{3}=-x-16$

D. $\frac{10-x}{-3}=x-4$

21. [24 - 25 S1 Mid-year Exam - 14] (63%)

14. The number of stamps owned by Amy is 8 times that owned by Ben. If Amy gives 21 of her stamps to Ben, they will have the same number of stamps. Find the total number of stamps owned by Amy and Ben.

A. 6

B. 42

C. 48

D. 54

GHS Sorted Past Paper - Conventional Questions
S1-04 Linear Equations in One Unknown

1. [20 - 21 S1 Final Exam - 06]

6. Solve $\frac{3-x}{6}=\frac{2}{3}$. **(2 marks)**

2. [20 - 21 S1 Final Exam - 14]

14. Janice and Karen shared some books. Originally, Karen has 20 books less than Janice. After Janice buying 30 extra books for herself, the number of books that Janice has now became twice that of Karen. Find the number of books owned by Janice originally. **(3 marks)**

3. [20 - 21 S1 Mid-year Exam - 04] (93%)

4. Solve $5(2x-3)=7x$. **(2 marks)**

4. [20 - 21 S1 Mid-year Exam - 05] (70%)

5. Solve $3-\frac{2x}{7}=9$. **(2 marks)**

5. [20 - 21 S1 Mid-year Exam - 06] (90%)

6. Mary and Cathy share 103 candies. If Cathy gets 13 more candies than Mary, find the number of candies that Cathy gets. **(3 marks)**

6. [20 - 21 S1 Mid-year Exam - 10] (54%)

10. Solve $\frac{4}{3}\left(\frac{x+1}{3}-\frac{1-x}{2}\right)=\frac{1}{3}$. **(3 marks)**

7. [20 - 21 S1 Mid-year Exam - 11] (40%)

11. The energy (E Joules) absorbed by a liquid when it is heating can be calculated by $E = 4200mT$ where m kg is the mass of the liquid and T °C is the change in temperature of the liquid during heating process. When 1.5 kg of this liquid is heated, it absorbed 25200 Joules and the final temperature is raised to –24 °C. Find the original temperature of the liquid before it is heated.

(4 marks)

8. [21 - 22 S1 Final Exam - 02] (66%)

2. Solve $\frac{3x+5}{10} - \frac{1-3x}{5} = 3$. **(3 marks)**

9. [21 - 22 S1 Mid-year Exam - 07] (61%)

7. Solve the following equations.

(a) $6 - 9x = 22 + 7(x - 2)$ **(2 marks)**

(b) $\frac{x+1}{2} - \frac{3-x}{4} = 5$ **(2 marks)**

10. [21 - 22 S1 Mid-year Exam - 08] (81%)

8. The sum of three consecutive even numbers is 162. By setting up an equation, find the three numbers. **(3 marks)**

11. [21 - 22 S1 Mid-year Exam - 11] (38%)

11. Chelsea has 20 oranges less than Janice. If Janice gives 30 oranges to Chelsea, the number of oranges Chelsea has will be the double of that of Janice. Find the total number of oranges they have. **(2 marks)**

12. [22 - 23 S1 Final Exam - 14] (73%)

14. Solve the following equations.

(a) $1-4x=7-6x$ **(2 marks)**

(b) $\frac{x+3}{5} - \frac{3x-1}{4} = -3$ **(2 marks)**

13. [22 - 23 S1 Mid-year Exam - 10] (70%)

10. Solve the following equations.

(a) $2(5x-2)-6x=8$ **(2 marks)**

(b) $\frac{2x+3}{4}-\frac{x+4}{3}=-1$ **(2 marks)**

14. [22 - 23 S1 Mid-year Exam - 11] (83%)

11. Johnny pays \$300 for 5 books and 7 pens. If the price of a book is \$24 more expensive than that of a pen, find the price of a book by setting up an equation. **(3 marks)**

15. [23 - 24 S1 Final Exam - 04] (68%)

4. The number of stickers owned by Anne is 3 times that of Beatrice. If Anne gives 13 stickers to Beatrice, they will have the same number of stickers. Find the total number of stickers owned by Anne and Beatrice. **(3 marks)**

16. [23 - 24 S1 Final Exam - 08] (67%)

8. Solve the following equations.

(a) $\frac{x+2}{4}=x$ **(2 marks)**

(b) $\frac{2}{3}(5-4y)=-2y$ **(2 marks)**

(c) $\frac{3x+2}{2}=\frac{11x-14}{5}+1$ **(3 marks)**

17. [23 - 24 S1 Mid-year Exam - 08] (77%)

8. The sum of two numbers is 160 and the difference is 20.

(a) Suppose x is the larger number. Find the value of x by setting up an equation. **(3 marks)**

(b) Find the product of the two numbers. **(2 marks)**

18. [23 - 24 S1 Mid-year Exam - 10] (55%)

10. Katy's age is three times that of Shanice now. 10 years later, Katy will be two times as old as Shanice. Find the present age of Shanice. **(3 marks)**

19. [23 - 24 S1 Mid-year Exam - 13] (31%)

13. (a) Solve $\frac{3x+1}{3}+\frac{2x+5}{5}=-\frac{x-1}{6}$. **(3 marks)**

(b) Using the result of **(a)**, solve the equation

$$\frac{1}{3}\left[3\left(\frac{5y}{47}\right)+1\right]+\frac{1}{5}\left[2\left(\frac{5y}{47}\right)+5\right]=-\frac{1}{6}\left[\left(\frac{5y}{47}\right)-1\right]$$ **(2 marks)**

20. [23 - 24 S1 Standardized Test - 04] (54%)

4. In **Figure 3**, $ABCDE$ is a regular pentagon and $AEFG$ is a square. If the perimeter of $AEFG$ and pentagon $ABCDE$ are $(70-y)$ cm and $(2y-10)$ cm respectively, find the value of y. **(3 marks)**

21. [24 - 25 S1 Final Exam - 11] (85%)

11. A fruit seller has some apples and bananas. The prices of an apple and a banana are \$3 and \$5 respectively. Vincent bought 3 more apples than bananas and paid exactly 41 dollars. Find the total number of bananas bought by Vincent. **(4 marks)**

22. [24 - 25 S1 Final Exam - 16] (51%)

16. (a) Solve $\frac{2x+1}{3}-\frac{x-2}{2}=2$. **(4 marks)**

(b) Hence, solve $\frac{2\left(\frac{n+1}{3}\right)+1}{3}-\frac{\left(\frac{n+1}{3}\right)-2}{2}=2$. **(2 marks)**

23. [24 - 25 S1 Mid-year Exam - 10] (84%)

10. The length of a rectangle is 9 cm longer than its breadth. If the perimeter of the rectangle is 70 cm, find the length and the breadth of the rectangle. **(4 marks)**

24. [24 - 25 S1 Mid-year Exam - 14] (76%)

14. Solve the following equations.

(a) $2(3x-5)=-4+3x$ **(3 marks)**

(b) $\frac{y}{9}-\frac{y+14}{6}=-3$ **(3 marks)**

25. [20 - 21 S2 Final Exam - 12] (84%)

12. Miffy and Dan have a total of 402 stickers. If Miffy uses 18 stickers to decorate her organizer, the remaining stickers she has will be 3 times as many as Dan has. Find the number of stickers Dan has. **(3 marks)**

26. [22 - 23 S1 Mid-year Exam - 05] (46%)

5. It is given that $P=\frac{3a-b^2}{a+3b}$. Find the value of a if $P=5$ and $b=-3$. **(3 marks)**