

***Yeka Sub City
Woreda 08 Education Office***

***2012 Mathematics Model
Examination for Grade 8***

***March 2012
Addis Ababa***

I. CHOOSE THE BEST ANSWER FROM THE GIVEN FOUR ALTERNATIVES AND SHADE THE LETTER OF YOUR CHOICE ON THE ANSWER SHEET.

1. The set of positive rational number is **not** closed under the operation of:-

- A. Addition B. subtraction C. multiplication
D. division

2. Which one of the following is **true**?

- A. NCZ^+ B. ZCN C. QCQ^-
D. ZCQ^+

3. Which of the following numbers is equal to $\frac{9}{4} - (3\frac{1}{3} - 1\frac{1}{4})$?

- A. $-\frac{1}{3}$ B. $-\frac{11}{6}$ C. $\frac{1}{6}$
D. $\frac{13}{6}$

4. Which of the following lists of numbers is written in an increasing order?

- A. $\frac{1}{5}, \frac{2}{3}, \frac{3}{2}, 1\frac{3}{4}$ B. $\frac{2}{3}, \frac{1}{5}, \frac{3}{2}, 1\frac{3}{4}$ C. $\frac{1}{5}, \frac{2}{3}, 1\frac{3}{4}, \frac{3}{2}$
D. $\frac{1}{5}, 1\frac{3}{4}, \frac{2}{3}, \frac{3}{2}$

5. Which of the following natural numbers is neither prime nor composite?

- A. 2 B. 1 C. 3
D. 4

6. Which of the following is **true**?

- A. $-1/3 < -1/2$ B. $-7.5 > -6.5$ C. $I-0.9 \mid < I-2.1I$
D. $I-12 I > I-13I$

7. What is the solution set of $|-3x-22|=5$?

- A. $\{ \}$ B. $-3 \text{ \& } 1/3$ C. $3 \text{ \& } -1/3$
D. $-9 \text{ \& } -1/17$

8. Three consecutive odd integers are such that 3 times the smallest is 9 more than twice the largest. Find the three numbers?

- A. 17, 18 & 19 B. 17, 19 & 21 C. 19, 21 & 23
D. 23, 25 & 27

9. Which of the following equations has **no** solution in the set of integers Z ?

A. $4x + 3 = 11$

B. $8x + 2 = 4x - 6$

C. $6 + 8x = 2$

D. $\frac{1}{4}x - \frac{1}{2} = \frac{x}{2}$

10. In the equation $\frac{1}{2x} + \frac{3}{x} = 5$, what is the value of x ?

A. $\frac{7}{10}$

B. $\frac{10}{7}$

C. $\frac{5}{7}$

D. $\frac{7}{5}$

11. Which of the following inequalities has a finite solution?

A. $3x - 6 \leq 2(2 - x)$, $x \in z^+$
 $x \in z$

C. $3x - 4 < x + 2$,

B. $\frac{1}{2}(x - 1) > 2$, $x \in W$
 Q

D. $\frac{2}{3}x > 1 - x$, $x \in$

12. If birr 1200 is divided among A,B and C in the ratio 5:7:8 respectively, what is the amount of B's share in Birr?

A. 305

B. 420

C. 480

D. 569.3

13. The ratio of the number of cows to the number of horses in the form is 2 to 3. If there are 24 horses, what is the number of cows?

A. 72

B. 48

C. 36

D. 16

14. Which of the following is **not** equal with the rest?

A. 2% of 150

B. 5% of 80

C. 12% of 25

D. 80% of $\frac{15}{4}$

15. A trader bought a TV set for birr 2000 and sold it at a loss of $5\frac{1}{2}\%$, what was the selling price?

- A. birr 1900 B. birr 1890 C. birr 1850
D. birr 1800
16. What is the simple interest on birr 75 at a rate of 6% per year for 8 years?
- A. 36 birr B. 4.88birr C. 111birr
D. 43.5birr
17. The mean of four numbers is 6. Three of the number is 4, 8 & 3. find the value of the other number?
- A. 8 B, 9 C, 10
D, 11
18. Which of the following statement is **not true** about parallelogram?
A, opposite angels are congruent B, consecutive angel are supplementary
B. The adjacent sides are congruent D, It is a quadrilateral
19. What is the measure of each interior angel of regular decagon?
- A, 130° B, 144° C, 162°
D, 17°
20. If $\sqrt{0.0441} = 0.21$, what is the value of $\sqrt{4.41}$?
- A. 21 B, 2.1 C, 0.21
D, 0.021
21. What is the simplified form of $\sqrt{13 - \sqrt{4 + \sqrt{16 + \sqrt{64}}}}$?
- A. 3 B, 4 C, 5
D. 6
22. What is the simplified form of $(1\frac{1}{4} - 1)^3$?
- A, 125/64 B, 27/64 C, 1/64
D, -1/64
23. What is the value of $\frac{\sqrt{4}}{2\sqrt{8}} \times \frac{\sqrt{4}}{2\sqrt{8}}$?
- A. 3 B. $\frac{1}{8}$ C. $\frac{1}{4}$
D. 4
24. Which one of the following includes all the other?
- A, number B, variable C, term
D, expression
25. If $a=3$, $b= -1$ & $c= -1$, then what is the value of $\frac{4a+2b+c}{a+b+c}$?
- A, 10 B, 9 C, 12
D, 11

A, -1/2

B, 1/2

C, 1

D, -1,

35. The sum of two numbers is 98 & the difference is 40. Find the numbers?

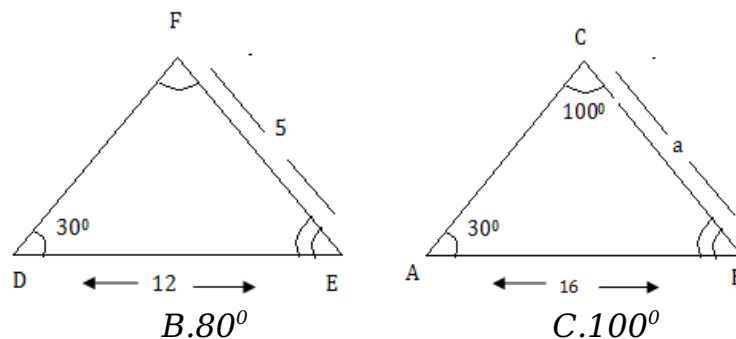
A, 60 & 38

B, 71 & 27

C, 69 & 29

D, 100 & 60

36. Let $\triangle ABC \cong \triangle DEF$ from the figure below. What is $m(\angle B)$?



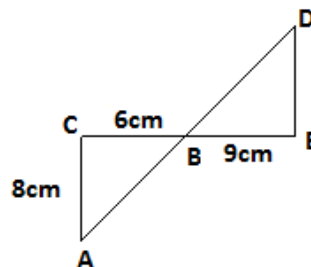
A. 50°

B. 80°

C. 100°

D. 30°

37. In the figure below $AC \parallel ED$. If $AC = 8\text{cm}$, $CB = 6\text{cm}$ and $BE = 9\text{cm}$. What is the length of DE ?



A. 12 cm

B. 10 cm

C. 15 cm

D. 18 cm

38. Which one of the following lines crosses a circle at two points?

A. tangent line

B. secant line

C. chord

D. diameter

39. What is the length of **18cm** long segment after central stretching with a scale factor $k = \frac{3}{2}$?

A. 12 cm

B. 27 cm

C. $\frac{39}{2}$ cm

D. 38 cm

40 If $\triangle ABC \cong \triangle DEF$ and $\overline{AC} = 12\text{cm}$, $\overline{CB} = 16\text{cm}$, $\overline{DE} = 9\text{cm}$ and $\overline{DF} = 18\text{cm}$. Find the length of $\overline{AB}$?

A. 20cm

B. 6cm

C. 16cm

D. 18cm

THE END