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Full Name: _____ Grade: 8 Section: _____

Subject: Mathematics Year: 2012 E.C Quarter: 4th Model Time allowed =

ruction: Choose the best answer from the suggested options and Write the letter of your choice on the answer sheet.

NB. Use letters to answer the questions. Make sure that this exam contains 40 questions.

1. Which of the following number is NOT a rational number?

A. 0 B. $\frac{-11}{13}$ C. 0.678 D. $\sqrt{27}$

2. The set of positive rational number (Q^+) is NOT closed under the operation of

A. addition B. subtraction C. multiplication D division

3. When $\frac{2}{3}[\frac{1}{2} - \frac{1}{3}] + \frac{2}{5}[\frac{2}{3} + \frac{1}{5}]$ is simplified it is equal to

A. $\frac{5}{9}$ B. $\frac{7}{18}$ C. $\frac{103}{225}$ D. $\frac{4}{9}$

4. Which one of the following is equivalent to 3y+6=12?

A.3y= 12 B. 5y-5=5 C.2y=2 D. y=4

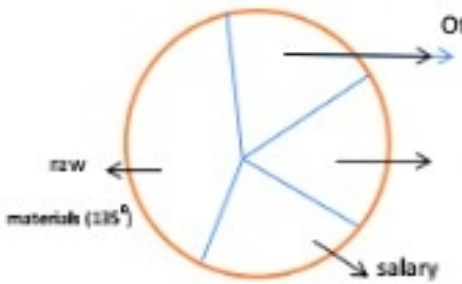
5. If $12\frac{1}{2}$% of a certain number is 300, what is the number?

A.2400 B.4200 C.2880 D.2560

6. Solomon invested 5000 Birr at 6% simple interest per annum and gained 1200 Birr. For how long did he invest the money?

A. 5 years B. 4 years C. 6 years D. 10 years

7. The expense of a factory is given by the pie chart as shown below. If the yearly budget of the factory is Birr 8,000,000.what is the amount spent for salary?



A. 2,000,000 birr

B. 900,000 birr

C. 400,000 birr

D. 1,000,000 birr

8. The mean, mode and median are known as

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A. measure of dispersion
C. Measure of central tendency
B. range
D. distribution

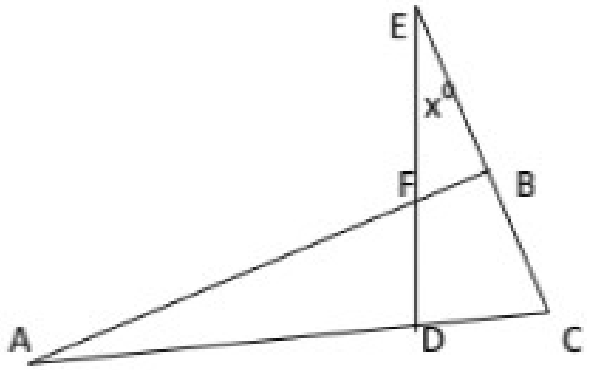
. If a quadrilateral is a parallelogram, then which of the following is not necessarily true?

A. The opposite angles are congruent
C. The diagonals are congruent
B. The diagonals bisect each other
D. The opposite sides are congruent

0. If the area of a circular region is $49\pi cm^2$, then what is its circumference?

A. $14\pi cm$
B. 24.5cm
C.14cm
D. $98\pi cm$

1. In the figure given below, $m(\angle A)=40^0$, $m(\angle C)=80^0$ and $m(\angle BFE)=30^0$. Which one of the following is equal to x^0?



A. 30^0
B. 45^0
C. 60^0
D. 53^0

2. The perimeter of a rectangular field is 118m. If the length of a rectangle is 7m less than twice the idth, what is the length of the field?

A. 21m
B. 30m
C.35m
D.37m

3. Which of the following is NOT true about a right circular cylinder?

A. Its base lie in parallel planes
B. Its upper and lower bases are congruent circular regions.
C. Its total surface is the union of the bases and the lateral surface
D. Its lateral surface area is the product of the area of a base and its altitude.

4. $\sqrt{0.1764}$ is equal to

A .0.042
B. 0.42
C. 4.2
D. 42

5. When $2\sqrt{75}+\sqrt{108}-2\sqrt{147}$ is simplified, it is equal to

A. $2\sqrt{2}$
B. $30\sqrt{3}$
C. $-4\sqrt{3}$
D. $2\sqrt{3}$

6. If $\sqrt{2(x+4)}=6$ then, what is the value of x?

A.15
B.22
C. 14
D.32

7. When $\frac{(a^3b)^2}{}$ and ba9i simplified, it is equal to

16. If $\sqrt{2(x+4)}=6$ then, what is the value of x?

A.15 B.22 C. 14 D.32

17. When $\frac{(a^2b)^2}{a^2b}$,a≠0, b≠0 simplified ,it is equal to

A. ab B. a^3b^2 C. ab^2 D. a^4b

18. If $(8.5)^2=72.25$, then what is the value of $\sqrt{0.007225}$?

A. 850 B. 0.085 c. 0.85 D.85

19. One of the following is NOT a binomial expression.

A. 2(10+a) B. (a+1)(a-1) C. $3ab^2-1$ D. $(x+y)^2$

20. which pair of expressions are like terms?

A. $\frac{-5}{6}a^3b^2$ and $11b^3a^2$ C. 5xy and $5x^2y^2$

B. $4x^2y^3$ and $\frac{-2}{3}a^2b^3$ D. $123a^2b$ and a^2b

21. The HCF of $288x^2y^4$, $396xy^3$ and $180x^3y^2$ is

A. 18xy B. $36x^2y^2$ C. $36xy^2$ D. $72xy^2$

22. If m is an integer, then what is the sum of the next four consecutive odd integers greater than 2m?

A. 8m+12 B. 8m+16 C. 6m+16 D. 8m+20

23. Which of the following is the truth set of the equation $\frac{2}{3}x+\frac{5}{6}=\frac{1}{2}(x-\frac{1}{3})$?

A. 6 B. -6 C. $\frac{1}{6}$ D. $\frac{-2}{3}$

24. Linear equations are said to be equivalent if they have the same

A. domain B. variable C. solution set D. Range

25. What is the solution set of the equation $\frac{2x-3}{5}+\frac{3x+1}{2}=\frac{9}{5}$?

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

26. Which of the following equation has a graph that is a vertical line?

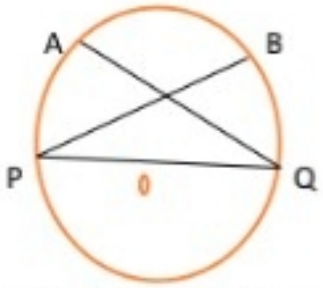
A. 2x-3y+2=0 B. 6x+7=11 C. 4y-10=0 D. y=3x

27. What is the value of k for which the line passes through points (3,k) and (-1,-2)have slope $\frac{3}{4}$?

A. k=-1 B. k=1 C. $k=\frac{-1}{2}$ D. $\frac{1}{2}$

28. In the figure given below, PQ is a diameter of a circle with center O. if m(<BPQ)=28^0 and

28. In the figure given below, PQ is a diameter of a circle with center O. if m[<BPQ]=28° and m[<AQP]=42° what is the measure of arc AB?



A. 42^0

B. 60^0

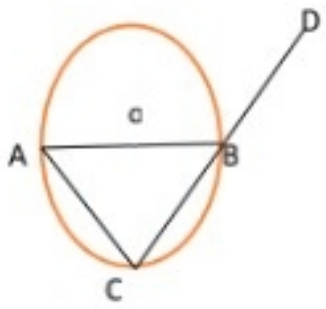
C. 40^0

D. 38^0

29. Which one of the following lines crosses a circle in two points?

A. A tangent line B. A secant line C. A chord D. A diameter

30. In the figure below, c is the center of the circle & m[<BAC]=45° What is the measure of <ABD?



A. 90^0

B. 120^0

C. 135^0

D. 145^0

31. Which of the following quadrilaterals is necessarily a rectangle?

A. A parallelogram C. A rhombus

B. A square D. A trapezium

32. A pairs of fair dice is tossed .what is the probability of not getting a sum 5 or 9?

A. $\frac{2}{9}$ B. $\frac{8}{9}$ C. $\frac{7}{9}$ D. $\frac{1}{9}$

33. Which of the following is true about a probability scale?

A. probability of unlikely is between 0 & $\frac{1}{2}$ C. probability of likely between $\frac{1}{2}$ &1

B. probability of even chance is $\frac{1}{2}$. D. All are true.

34. Which of the following plane figures are NOT necessarily similar?

A. Any two circles C. Any two squares

B. Any two rectangles D. Any two equilateral triangles

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A. Any two circles
C. Any two squares
B. Any two rectangles
D. Any two equilateral triangles

4

35. ΔABC ~ ΔDEF, perimeter of ΔABC is 12cm and perimeter of ΔDEF is 24cm What is the area ΔDEF if area of ΔABC is 24cm^2

A. 24cm^2 B. 48cm^2 C. 96cm^2 D. 36cm^2

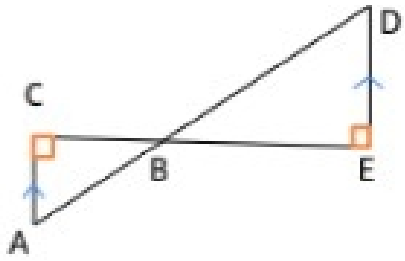
36. Which triple of numbers can NOT be sides of a right angle triangle?

A. 3,4,5 B. 6,8,10 C 3,7,9 D 5, 12, 13

37. A man travels 6km due north and 8km due east. How far is the man now from the starting place?

A. 10km B. 12km C. 9km D 14km

38. In the figure given below AC is parallel to ED, if AC= 8cm, BC = 6cm and BE = 9cm what is the length of DE?



A. 12cm
B. 10cm
C. 15cm
D. 18cm

39. A solid figure formed by joining all points of a circle to a point NOT on the plane of the circle is called

A. pyramid B. cylinder C prism D. cone

40. One of the following is false about meaning of trigonometric ratios?

A. $\sin_\theta = \frac{opp}{hyp}$ B. $\cos_\theta = \frac{adj}{hyp}$ C. $\tan_\theta = \frac{opp}{adj}$ D. $\tan_\theta = \frac{adj}{opp}$

SET BY: NATNAEL GETACHEW