

Math 103-General Mathematics		Midterm Exam	Nov 15, 2024
Last name :	Instructors : Ayhan A., Merve S., Ayşe D. Ç.	Signature	
Name :	Time : 11: 30		
ID Number :	Duration : 60 <i>minutes</i>		
25 QUESTIONS ON 2 PAGES, EACH IS 4 POINT.			TOTAL 100 POINTS

1. **Make sure your mobile phone is switched off.** You are required to place your mobile phone out of reach as directed by the Invigilators in the venue together with any bags, books, coats etc.
2. **Any type of electronic devices** such as cell phones, calculators, smart watches and **any unauthorised material** such as written notes in paper or written notes in your hands are NOT ALLOWED in the exam. Students seen with one of these electronic devices or written notes during the exam will be accused of **cheating, and disciplinary action** will be initiated accordingly.

1. Calculate $18.85 \div 1.3$:

A. 1.45 **B. 14.5** C. 24.505

2. If $\frac{2}{3}$, $\frac{3}{4}$ and $\frac{5}{6}$ arranged in ascending order, the second number would be:

A. $\frac{3}{4}$ B. $\frac{2}{3}$ C. $\frac{5}{6}$

3. The hundredths digit of the decimal 271.384 is:

A. 4 B. 2 **C. 8**

4. A work is shared by 12 men and it takes 5 hours to finish it. How many men should work to finish it for 3 hours?

A. 36 B. 10 **C. 20**

5. $2\frac{2}{7} - 1\frac{1}{3}$ is equal to:

A. $\frac{20}{21}$ B. $\frac{2}{21}$ C. $1\frac{1}{21}$

6. $\frac{4}{3} \div 8$ is equal to:

A. $\frac{32}{3}$ **B. $\frac{1}{6}$** C. $\frac{2}{3}$

7. Round 51.5555 into 2 decimal places:

A. 51.5 B. 52 **C. 51.56**

8. A shop started to sell its one item with the 70% discount to £18. Find the original price.

A. £60 B. £30.6 C. £84

9. Which of the following is **not** a prime number:

A. 47 B. 101 **C. 93**

10. Evaluate $3.56 \times 10^3 + 2.48 \times 10^2$ and giving your answer **in Standart Form**.

A. 3808×10^{-2} B. 6.04×10^3 **C. 3.808×10^3**

11. If 1 inch = 2.5 centimetres then 70 centimetres is equivalent to:

A. 28 inch B. 175 inch C. 140 inch

12. An airplane flying a distance of 200 kilometres used 30 litres of gasoline. How many litres will it need to travel 500 kilometres?
A. 75 litres B. 60 litres C. 90 litres
13. A sum of money is shared in the ratio 2 : 7. If the smallest share is £24, what is the total amount of money?
 A. £84 **B. £108** C. £216
14. The area of a triangle has an altitude of 60 mm and a base of 40 mm is:
 A. 120 cm² B. 2.4 m² **C. 12 cm²**
15. The volume, in cubic centimetre, of a circular cylinder of diameter 8 cm and height 15 cm is:
 A. 120π **B. 240π** C. 960π
16. Correct 26.54238 to four significant figures:
A. 26.54 B. 26.5424 C. 26.55
17. Express $\frac{x}{4y} - \frac{1}{xy}$ as a single fraction:
 A. $\frac{x-4y}{4xy^2}$ **B. $\frac{(x-2)(x+2)}{4xy}$** C. $\frac{(x+2)(x-2)}{4xy^2}$
18. $2a(a+3b) - 3a(2b-a-1)$ is equal to:
A. $a(3+5a)$ B. $6a^2 - 3a + 1$ C. $a(3a+5)$
19. Factorize $2x - by - 2y + bx$:
 A. $(b-2)(x+y)$ **B. $(2+b)(x-y)$** C. $(2-b)(x-y)$
20. Transpose $y = \frac{3x-1}{x-2}$ for x:
 A. $x = \frac{2y+1}{y+3}$ B. $x = \frac{3y-1}{y-2}$ **C. $x = \frac{2y-1}{y-3}$**
21. A man buys two cables (one red and one blue) with a total length of 11 meters. The red one costs 3 liras and the blue one costs 7 liras. If the total cost is 55 liras, how many centimeters of the red cable does he buy?
 A. 55cm **B. 550cm** C. 5500cm
22. Which of the following is equivalent to $\frac{x}{2y^2}$:
 A. $4y \left(\frac{xy^{-2}}{2} \right)^2$ B. $y \left(\frac{2\sqrt{x^2}}{y} \right)$ **C. $2y \left(\frac{4y^3}{x} \right)^{-1}$**
23. The Denary number 29_{10} in Binary is:
A. 11101 B. 10110 C. 101011
24. The Octal number 215_8 in Denary is:
 A. 340 **B. 141** C. 601
25. The Denary number 508_{10} in Hexadecimal is:
 A. 1AC B. 805 **C. 1FC**