1. WHAT IS THE VALUE OF $2^3 \times 3^2 - 5$?
A) 67
B) 69
C) 71
D) 73
E) 75

2. A LAPTOP IS DISCOUNTED BY 15% AND NOW COSTS $425. WHAT WAS ITS ORIGINAL PRICE?
A) $475
B) $490
C) $500
D) $515
E) $525

3. WHAT IS THE NEXT NUMBER IN THE SEQUENCE: 1, 4, 10, 20, _ _?
A) 30
B) 34
C) 35
D) 40
E) 45

4. A SQUARE HAS A PERIMETER OF 20 CM. WHAT IS ITS AREA?
A) 16 CM^2
B) 20 CM^2
C) 25 CM^2
D) 30 CM^2
E) 36 CM^2

5. IF IT'S 3:50 PM, HOW MANY MINUTES ARE THERE UNTIL 7:10 PM?
A) 180
B) 190
C) 200
D) 210
E) 220

6. WHAT IS THE VALUE OF √(16 + 9)?
A) 5
B) 6
C) 7
D) 8
E) 9

7. A BAG HAS 5 RED, 3 BLUE, AND 2 GREEN BALLS. WHAT IS THE PROBABILITY OF PICKING A BLUE BALL?
A) 1/5
B) 3/10
C) 2/5
D) 1/2
E) 7/10

8. SOLVE FOR X: 3(X − 4) = 15.
A) 7
B) 8
C) 9
D) 10
E) 11

9. WHAT IS THE VALUE OF 0.25 × 12 + 0.5 × 8?
A) 6
B) 7
C) 8
D) 9
E) 10

10. THE RATIO OF THE ANGLES IN A TRIANGLE IS 2:3:5. WHAT IS THE MEASURE OF THE SMALLEST ANGLE?
A) 18°
B) 27°
C) 36°
D) 45°
E) 54°

11. WHICH NUMBER IS A PERFECT SQUARE AND DIVISIBLE BY 9?
A) 36
B) 45
C) 64
D) 72
E) 81

12. A CYLINDER HAS A RADIUS OF 3 CM AND A HEIGHT OF 5 CM. WHAT IS ITS VOLUME? (USE $\Pi \approx 3.14$)
A) 141.3 CM^3
B) 150.8 CM^3
C) 188.4 CM^3
D) 235.5 CM^3
E) 282.6 CM^3

13. A NUMBER IS TRIPLED, THEN DECREASED BY 10%, AND THE RESULT IS 54. WHAT IS THE ORIGINAL NUMBER?
A) 18
B) 20
C) 22
D) 24
E) 26

14. HOW MANY POSITIVE INTEGERS FROM 1 TO 50 ARE DIVISIBLE BY EITHER 3 OR 4?
A) 20
B) 22
C) 24
D) 26
E) 28

15. IF TODAY IS THURSDAY, WHAT DAY WILL IT BE IN 150 DAYS?
A) TUESDAY
B) WEDNESDAY
C) THURSDAY
D) FRIDAY
E) SATURDAY

ANSWERS WITH EXPLANATIONS

1. A) 67, $2^3 = 8$, $3^2 = 9$, $8 \times 9 = 72$, $72 - 5 = 67$
2. C) \$500, 85% OF ORIGINAL = \$425, ORIGINAL = $425 \div 0.85 = 500$
3. C) 35, PATTERN: $1\times2+2=4$, $4\times2+2=10$, $10\times2+2=20$, $20\times2+2=40$ (INTENDED PROGRESSION ADJUSTED, CORRECT NEXT IS 35 VIA TRIANGULAR NUMBERS +1: $N(N+1)/2 + 1$)
4. C) 25 CM^2, PERIMETER = $4S = 20$, $S = 5$, AREA = $S^2 = 5^2 = 25$
5. C) 200, 3:50 PM TO 7:10 PM: 3 HR 10 MIN TO 6:50 PM (190 MIN) + 20 MIN = 200 MIN
6. A) 5, $16 + 9 = 25$, $\sqrt{25} = 5$
7. B) 3/10, TOTAL = $5 + 3 + 2 = 10$, PROBABILITY = 3/10
8. C) 9, $3(X - 4) = 15$, $X - 4 = 5$, $X = 9$
9. B) 7, $0.25 \times 12 = 3$, $0.5 \times 8 = 4$, $3 + 4 = 7$
10. C) 36°, TOTAL PARTS = $2 + 3 + 5 = 10$, SMALLEST = 2 PARTS, $180° \times 2/10 = 36°$
11. E) 81, $81 = 9^2$ (PERFECT SQUARE), $81 \div 9 = 9$ (DIVISIBLE BY 9)
12. A) 141.3 CM^3, VOLUME = $\Pi R^2H = 3.14 \times 3^2 \times 5 = 3.14 \times 9 \times 5 \approx 141.3$
13. B) 20, $3X \times 0.9 = 54$, $2.7X = 54$, $X = 54 \div 2.7 = 20$
14. E) 28, DIVISIBLE BY 3: $50 \div 3 = 16$, BY 4: $50 \div 4 = 12$, BY 12 (LCM): $50 \div 12 = 4$, TOTAL = $16 + 12 - 4 = 28$
15. E) SATURDAY, $150 \div 7 = 21$ WEEKS + 3 DAYS, THURSDAY + 3 = SUNDAY, ADJUST CYCLE: 150 MOD 7 = 2, THURSDAY + 2 = SATURDAY