Intro Algebra Challenge

Choose one answer per question. Circle A, B, C, or D.

1. What is 3x + 2 when x = 4?
   A. 14
   B. 9
   C. 12
   D. 18

2. Which expression simplifies to 9m?
   A. 9 + m
   B. 4m + 5
   C. 4m + 5m
   D. 5m − 4m

3. Which expression means ‘seven less than twice a number n’?
   A. 7 − 2n
   B. 2n − 7
   C. 2(n − 7)
   D. 2n + 7

4. Solve x + 11 = 26.
   A. 37
   B. 13
   C. 16
   D. 15

5. Solve 7y = 63.
   A. 7
   B. 9
   C. 8
   D. 56

6. Solve 4a − 9 = 19.
   A. 7
   B. 2.5
   C. 5
   D. 10

7. Which expression is equivalent to $3(2b - 5) + b$?

A. $3b - 14$
B. $7b - 5$
C. $6b - 15$
D. $7b - 15$

8. Solve $5x + 1 = 2x + 19$.

A. 7
B. 4
C. 6
D. 10

9. Solve $(t + 6)/4 = 5$.

A. 14
B. 10
C. 20
D. 26

10. What value solves $2(p - 4) = 3(p - 7)$?

A. 29
B. 8
C. 11
D. 13

11. A taxi charges a $5 pickup fee and $3 per mile. What trip length gives a $32 charge before tip?

A. 8 miles
B. 7 miles
C. 9 miles
D. 11 miles

12. Which equation has no real solution?

A. $3(x + 2) = 3x + 6$
B. $3(x + 2) = 3x + 8$
C. $3(x + 2) = 2x + 8$
D. $3(x + 2) = 4x + 8$

13. The sum of three consecutive whole numbers is 105. What is the largest?

A. 37
B. 34
C. 35
D. 36

14. A two-hour pass costs $9 plus $4 for each extra hour. An all-day pass costs $29. For how many total hours do both options cost the same?

A. 7 hours
B. 5 hours
C. 6 hours
D. 8 hours

15. A school sells 36 tickets. Adult tickets cost $8 and student tickets cost $5. The school collects $228. How many adult tickets were sold?

A. 18
B. 12
C. 16
D. 20