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ACT PREPARATION SINCE 1994

Session #6 Quiz B (1 of 3)

10 Minutes—10 Questions

USE THIS AREA FOR FIGURING.

1. The expression $4x^2y^3 \cdot 2(xy^2)^3 \cdot x^4y^2z$ is equivalent to:
   - **A.** $6x^7y^{13}z$
   - **B.** $6x^9y^{11}z$
   - **C.** $8x^7y^{13}z$
   - **D.** $8x^9y^{11}z$
   - **E.** $32x^7y^{13}z$

2. By doubling the sides of a cube, the volume increases by a factor of:
   - **F.** 2
   - **G.** 4
   - **H.** 6
   - **J.** 8
   - **K.** 12

3. Simplify $\sqrt[5]{x^{11}y^8z^{15}}$.
   - **A.** $x^2y^1z^3\sqrt[5]{x^1y^3}$
   - **B.** $x^2y^1z^3\sqrt[5]{x^1y^3z^3}$
   - **C.** $x^1y^1z^3\sqrt[5]{x^1y^3z^3}$
   - **D.** $x^2y^1z^2\sqrt[5]{x^2y^3z^3}$
   - **E.** $x^2y^1z^1\sqrt[5]{x^1y^3z^3}$

4. 36 is 80% of what number?
   - **F.** 22.2
   - **G.** 28.8
   - **H.** 40
   - **J.** 45
   - **K.** 60

Session #6 Quiz B (2 of 3)

10 Minutes—10 Questions

USE THIS AREA FOR FIGURING.

5. An airplane begins its descent when it is directly above a point on the ground that is 6000 feet away from the beginning of the runway. If the airplane descends at a 7° angle from the runway, how high above the ground was the airplane when it started to descend?

A. $6000\cos 7°$

B. $\frac{6000}{\sin 7°}$

C. $6000\tan 7°$

D. $6000\cot 7°$

E. $6000\sec 7°$

6. Jack is participating in a game show. He must pick one box from 99. Twice as many boxes contain no prizes as boxes that contain prizes. In the boxes that contain prizes, $\frac{1}{3}$ contain a new car, while $\frac{2}{3}$ of the boxes contain \$1000 cash. If Jack selects a box at random, what are the odds that he wins a new car?

C. $\frac{15}{48}$

D. $\frac{1}{33}$

E. $\frac{1}{3}$

J. $\frac{1}{9}$

K. $\frac{3}{5}$

7. Lines 1 and 2 are parallel, and Line 2 is intersected by Lines 3 and 4 at a single point. Find $\angle x$.

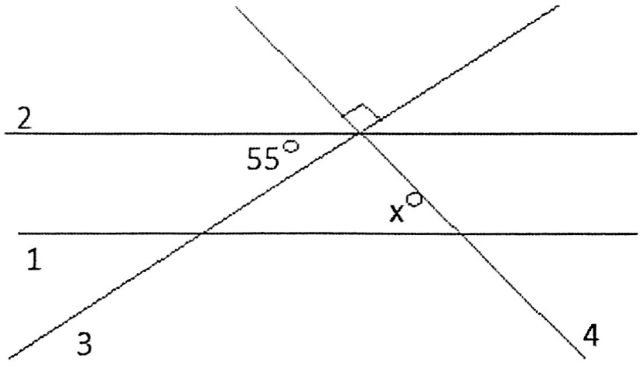
A. 25°

B. 35°

C. 40°

D. 55°

E. 150°



Session #6 Quiz B (3 of 3)

10 Minutes—10 Questions

USE THIS AREA FOR FIGURING.

8. If $3y + 2x = 12$ and $6y + 2x = 18$, what is the value of x?

C. -1
D. 1
E. 2
J. 3
K. 6

9. $\frac{123!}{120! * 123 * 121} =$

A. 121
B. 122!
C. 122
D. 123
E. 12321

10. In the (x,y) coordinate plane, what is the slope of the line $y + y - x - x + 4x = 2$?

F. -1
G. -2
H. $\frac{1}{2}$
J. 1
K. 2