



36. The larger of two numbers exceeds twice the smaller number by 8. The sum of twice the larger and 3 times the smaller number is 65. If x is the smaller number, which equation below determines the correct value of x ?

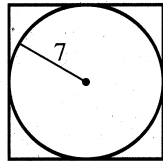
F. $3(2x + 8) + 2x = 65$
 G. $3(2x - 8) + 2x = 65$
 H. $(4x + 8) + 3x = 65$
 J. $2(2x + 8) + 3x = 65$
 K. $2(2x - 8) + 3x = 65$

DO YOUR FIGURING HERE.

37. Members of the fire department lean a 30-foot ladder against a building. The side of the building is perpendicular to the level ground so that the base of the ladder is 10 feet away from the base of the building. To the nearest foot, how far up the building does the ladder reach?
- A. 10
 B. 20
 C. 28
 D. 31
 E. 40

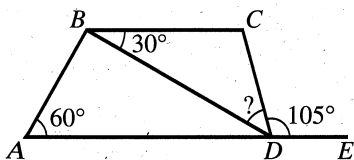
38. A square is circumscribed about a circle of 7-foot radius, as shown below. What is the area of the square, in square feet?

F. 49
 G. 56
 H. 98
 J. 49π
 K. 196



39. The ratio of the side lengths for a triangle is exactly 12:14:15. In a second triangle similar to the first, the shortest side is 8 inches long. To the nearest tenth of an inch, what is the length of the longest side of the second triangle?
- A. 11.0
 B. 10.0
 C. 9.3
 D. 6.4
 E. Cannot be determined from the given information

40. In the figure below, $ABCD$ is a trapezoid, E lies on \overleftrightarrow{AD} , and angle measures are as marked. What is the measure of $\angle BDC$?

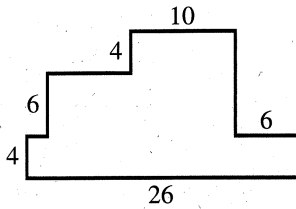


F. 15°
 G. 25°
 H. 30°
 J. 35°
 K. 45°

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41. In the figure shown below, each pair of intersecting line segments meets at a right angle, and all the lengths given are in inches. What is the perimeter, in inches, of the figure?



- A. 40
B. 52
C. 56
D. 66
E. 80

DO YOUR FIGURING HERE.

42. Of the 804 graduating seniors in a certain high school, approximately $\frac{2}{5}$ are going to college and approximately $\frac{1}{4}$ of those going to college are going to a state university. Which of the following is the closest estimate for how many of the graduating seniors are going to a state university?

- F. 80
G. 90
H. 160
J. 200
K. 320

43. If x and y are positive integers such that the greatest common factor of x^2y^2 and xy^3 is 45, then which of the following could y equal?

- A. 45
B. 15
C. 9
D. 5
E. 3

44. If 115% of a number is 460, what is 75% of the number?

- F. 280
G. 300
H. 320
J. 345
K. 400

45. What is the distance in the standard (x,y) coordinate plane between the points $(1,0)$ and $(0,5)$?

- A. 4
B. 6
C. 16
D. 36
E. $\sqrt{26}$

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