Name:

5-a-day ACT prep #6

Solve each problem, show your work, and then choose the correct answer.

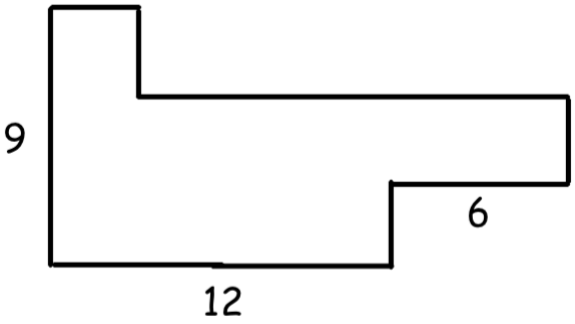
Do not linger over problems that take too much time. Solve as many as you can; then return to the others in the time you have left for this test.

You are permitted to use a calculator on this test. You may use your calculator for any problems you choose, but some of the problems may best be done without using a calculator.

Note: Unless otherwise stated, all of the following should be assumed.

1. Illustrative figures are NOT necessarily drawn to scale.
2. Geometric figures lie in a plane.
3. The word *line* indicates a straight line.
4. The word *average* indicates arithmetic mean.

1. In the figure below all angles are right angles. The side lengths have measures as shown. What is the perimeter of the figure?



A. 27
B. 42
C. 54
D. 108
E. Cannot be determined.

2. The lines $x + y = -5$ and $4x - y = 20$ intersect at which of the following points?

A. $(-2, -3)$
B. $(-1, -4)$
C. $(1, -6)$
D. $(3, -8)$
E. $(4, -9)$

3. On a map, $\frac{1}{2} inch$ represents $60\ miles$. What distance does a line segment that is $3\frac{1}{4} inches$ represent?

A. $210\ miles$
B. $360\ miles$
C. $390\ miles$
D. $420\ miles$
E. $450\ miles$

4. What is the value of x in the equation $3x + 34 = -2(1 - 6x)$?

A. -4
B. $-\frac{12}{5}$
C. $\frac{32}{15}$
D. $\frac{32}{9}$
E. 4

5. A bag contains 3 red marbles, 7 yellow marbles, and 5 white marbles. Grant randomly picks a marble out of the bag. What is the probability it is not white?

A. $\frac{1}{5}$
B. $\frac{1}{3}$
C. $\frac{7}{15}$
D. $\frac{8}{15}$
E. $\frac{2}{3}$