Name:

5-a-day ACT prep #7

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

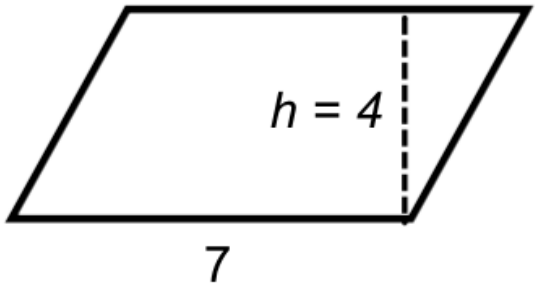
Do not linger over problems that take too much time. Solve as many as you can; then return to the others in the time you have left for this test.

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. What is the area of the parallelogram shown below?



A. 14
B. 28
C. 42
D. 56
E. Cannot be determined.

2. What is the slope of a line perpendicular to the line given by the equation $5x + y - 2 = 0$?

A. -5
B. $-\frac{2}{5}$
C. $-\frac{1}{5}$
D. $\frac{1}{5}$
E. 5

Slope -5 ↑
$\perp$ $\frac{1}{5}$

3. Luna's scores on her first 4 tests were 84, 79, 95, and 93. She takes a 5th test and the average of all 5 scores is 90. What was her score on the 5th test?

A. 96
B. 97
C. 98
D. 99
E. Cannot be determined.

$\frac{84+79+95+93+?}{5} = 90$
$351 + ? = 450$
$? = 99$

4. What is the value of x in the equation $5x + 1 = -5(1 - x)$?

A. -1
B. $\frac{2}{5}$
C. $\frac{3}{5}$
D. $\frac{5}{3}$
E. No solution.

$5x+1 = -5+5x$
$-5x \quad -5x$
$1 \neq -5$
Not true

5. What is the distance between the points $(-3, 7)$ *and* $(5, 1)$ rounded to the nearest integer?

A. 8
B. 9
C. 10
D. 12
E. 14

$d = \sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$
$d = \sqrt{(-3-5)^2+(7-1)^2}$
$d = \sqrt{(-8)^2+(6)^2}$
$d = \sqrt{64+36}$
$d = \sqrt{100}$
$d = 10$