Alg 2 PSAT/SAT PRACTICE 3-16-20

Questions 9 and 10 refer to the following information.

$$a = 1{,}052 + 1.08t$$

The speed of a sound wave in air depends on the air temperature. The formula above shows the relationship between a, the speed of a sound wave, in feet per second, and t, the air temperature, in degrees Fahrenheit (°F).

9

Which of the following expresses the air temparature in terms of the speed of a sound wave?

A) $t = \dfrac{a - 1{,}052}{1.08}$

B) $t = \dfrac{a + 1{,}052}{1.08}$

C) $t = \dfrac{1{,}052 - a}{1.08}$

D) $t = \dfrac{1.08}{a + 1{,}052}$

10

At which of the following air temperatures will the speed of a sound wave be closest to 1,000 feet per second?

A) −46°F

B) −48°F

C) −49°F

D) −50°F

CONTINUE

PSAT/SAT Answers

Questions 9 and 10 refer to the following information.

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$a = 1{,}052 + 1.08t$

$-1{,}052 \quad -1{,}052$

$\dfrac{a - 1{,}052}{1.08} = \dfrac{1.08t}{1.08}$

$t = \dfrac{a - 1{,}052}{1.08}$

10

At which of the following air temperatures will the speed of a sound wave be closest to 1,000 feet per second?

a-value

A) −46°F

B) −48°F

C) −49°F

D) −50°F

$t = \dfrac{1000 - 1{,}052}{1.08}$

$t = -48.15°$