

### INSTANT TEST Page 1-21

Which of the following statements is/are nonsense? Why?

- (1) Albert was #1 out of the top 3 in the school ranking and Betty was #2, so Betty must have gotten two-thirds of the score that Albert got.
- (2) The police car was going 100 mph and my car was going 50 mph; thus the police car was going twice as fast as mine.
- (3) It's 80 miles to North Galanga from Balbuto and it's 160 miles to South Galanga from Balbuto. Therefore it is twice as far from Balbuto to South Galanga as it is from Balbuto to North Galanga.
- (4) Bathun's car gets 40 miles per gallon (mpg) of gasoline on average whereas Carlita's car gets 20 mpg. Therefore Bathun's car is twice as efficient ( $40/20$ ) as Carlita's in terms of mpg.
- (5) Bathun's car takes 0.025 gallons per mile (gpm) of gasoline on average whereas Carlita's car takes 0.05 gpm. Therefore Bathun's car is half as expensive to run ( $0.025/0.05$ ) as Carlita's in terms of gpm.
- (6) Davido's car takes 1<sup>st</sup> place in the WildCircles gasoline efficiency contest whereas Eduardo's car takes 10<sup>th</sup> place in the same contest. Therefore Eduardo's car is  $1/10^{\text{th}}$  as efficient as Davido's car.
- (7) I assigned the Furuncle automobile a fuel efficiency score of 4 out of 5 in importance for choosing a new car and maximum speed a score of 4 out of 5 in importance. The Furuncle model thus scored a total of  $4 + 4 = 8$  out of 10 possible points. In contrast, the Putrescent model scored 3 out of 5 and a miserable 1 out of 5, respectively, on those two evaluations. Therefore the Putrescent model, with  $3 + 1 = 4$  as its total score was half as good as the Furuncle model overall.
- (8) The Rigellian Robots spaceball team was 1<sup>st</sup>, 4<sup>th</sup>, 2<sup>nd</sup>, 1<sup>st</sup>, and 3<sup>rd</sup> in the last five Pan-Galactic Games. Therefore, the Rigellian Robots spaceball team has averaged  $(1+4+2+1+3)/5 = 11/5 = 2.2^{\text{nd}}$  place in the last five Pan-Galactic Games.
- (9) These Venusian pandas come in three colors: infrared (color 1), ultraviolet (color 2) and pink (color 3). In the sample under consideration, there are 5 infrareds, 2 ultraviolets and 4 pinks, thus giving an average color of  $(1*5 + 2*2 + 3*4)/(5+2+4) = 21/11 = 1.9$ .
- (10) Albert scored 800 on the math SAT and Bruce scored 400 on the same test. The SAT scores have a minimum of 200 as the lowest possible score. Thus Albert scored  $(800/400) = 2$  times as many points as Bruce in the SAT.
- (11) Cathy scored 800 on the math SAT and Daniella scored 400 on the same test. The SAT scores have a minimum of 200 as the lowest possible score. Thus Cathy scored  $(800-200)/(400-200) = 3$  times as many points as Daniella in the SAT.