Problems of the Week # 8

Name: _____ Date:_____

Circle the one best answer. Justify your answer by showing all work below.

36. The smallest angle in a triangle measures one-third of the measure of the largest angle. The third angle is 20 degrees more than the measure of the smallest. Find the measure of the smallest angle.

A. 16° B. 32° C. 40° D. 52° E. 96°

37. Simplify: $\sqrt[3]{-64a^{14}b^{13}}$

A. $-4a^4b^4\sqrt[3]{a^2b}$ B. $4ia^4b^4\sqrt[3]{a^2b}$ C. $4\sqrt[3]{a^{13}b^{14}}$ D. $4ab\sqrt[3]{a^5b^5}$ E. $-4a^4b^4\sqrt{a^2b}$

38. Simplify this complex fraction: $\dfrac{a^{-1}+b^{-1}}{a^{-1}}$

A. $1+\dfrac{1}{b}$ B. $\dfrac{a}{a+b}$ C. $\dfrac{b+a}{b}$ D. $\dfrac{1}{b}$ E. $1+\dfrac{b}{a}$

39. The population of the earth increased from 5.9 billion to 6 billion from one year to the next. What number best describes the percent increase in the population that year?

A. 0.0169% B. $\dfrac{1}{60}\%$ C. 1.69% D. $\dfrac{1}{59}\%$ E. 98.33%

40. The measures of rainfall for five consecutive days during the winter are: 6" 2" 10" 2" 5"
For the measure of those five days, which of the following is true?

I. The median equals the mode.
II. The median equals the arithmetic mean.
III. The range equals the median.

A. I only B. II only C. III only D. I and II only E. I and III only