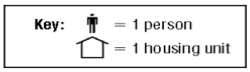
fcat review for 8th grade math 2008

Multiple Choice
Identify the letter of the choice that best completes the statement or answers the question.

____ 1. Find $\frac{5^8}{5^4}$.
a. 1^2
b. 1^4
c. 5^2
d. 5^4

____ 2. Reality shows have exploded in popularity in recent years. One network introduced two shows during its "Reality Premiere Week." Polls indicate that the first show had 2.8×10^6 viewers and the second show had 1.9×10^7 viewers. Assume that about 870,000 people who watched the first show also watched the second show. Without counting anyone twice, approximately how many people watched the shows that week?
a. 2.09×10^7
b. 2.18×10^7
c. 4.7×10^7
d. 5.32×10^7

____ 3. In 2000, the population of Florida was about 1.6×10^7, and there were approximately 7.3×10^6 housing units in the state. If the population were evenly distributed among the housing units, about how many persons would live in each unit?



a.
b.
c.
d.

____ 4. There are an estimated 10^{22} stars in the visible universe. Scientists classify stars by color according to their approximate surface temperatures. Yellow-white stars, for example, have a surface temperature of about 11,000°F. About how many yellow-white stars would there be if $\frac{1}{5}$ of all visible stars were in the 11,000°F temperature range?
a. 2×10^{21}
b. 5^{22}
c. 25×10^{21}
d. 50^{22}

____ 5. Find $(8.4 \times 10^{-5}) \cdot (7.0 \times 10^9)$.
a. 5.88×10^4
b. 58.8×10^{-45}
c. 5.88×10^5
d. 58.8×10^{-14}

____ 6. The mass of the moon is 1.228×10^{-2} times the mass of Earth. Which uses three significant digits to represent the mass of the moon in scientific notation?
a. 7.0×10^{22} kilograms
b. 7.347124×10^{22} kilograms
c. 7.347×10^{22} kilograms
d. 7.35×10^{22} kilograms

____ 7. Evaluate $((abc)^2)^5$.
a. $a^7b^7c^7$
b. $a^{10}b^{10}c^{10}$
c. (ab)c7
d. $5(a^2b^2c^2)$

____ 8. There are roughly 320,000 words in the English language. If Ryan knows about 12,000 English words, how can he figure out what part of the total number of words he knows?
a. Divide 3.2×10^5 by 1.2×10^4.
b. Divide 1.2×10^4 by 3.2×10^5.
c. Divide 3.2×10^4 by 1.2×10^5.
d. Divide 1.2×10^5 by 3.2×10^4.