ASTRONOMY 102 MATH QUIZ

Write the letter in the space beside the question.

_____ **1.** You are driving to Seattle, which is approximately 200 km away. If you drive at a constant 50 km/hour how long does it take?
A. 4 hours
B. 5 hours
C. 10 hours
D. 10,000 hours

_____ **2.** By what factor is 6 bigger than 3?
A. 2
B. 3
C. 1
D. 6

_____ **3.** The number 62 is closest to what power of 10?
A. 100
B. 10
C. 1
D. 60

_____ **4.** In a particular problem that you are considering there are two quantities, A and B. If $A \propto B^2$ ('A is proportional to B squared'), then if I double B, what happens to A?
A. It increases by 4
B. It doubles too
C. It increases by 16
D. It stays the same

_____ **5.** You have square floor tiles which are $1\,\text{m} \times 1\,\text{m}$. How many could you fit into a room which is $10\,\text{m} \times 10\,\text{m}$?
A. 100
B. 10
C. 10,000
D. 20

_____ **6.** A circle has radius r. What is the length of its circumference?
A. $2\pi r$
B. πr^2
C. $2r$
D. π

_____ **7.** How many 1 cm radius balls could you make out of a giant 1 m radius ball of silly putty?
A. 1
B. 100
C. 10,000
D. 1,000,000

_____ **8.** If I inflate a balloon to twice its radius, what is the ratio of the new density to the old density of air inside the balloon?
A. same
B. 1/2
C. 1/8
D. 1/16