



# P9-5

NAME \_\_\_\_\_ MEET 5 PYTHAGOREAN DIVISION MARCH 12, 1998

GRADE 9  
30 MINUTES  
ANSWER COLUMN

DIRECTIONS: Place your answer to each question below in the answer column.

1) If  $R_{a\ b}$  is defined as  $4a+1-2b$  and if  ${}_6R_5 = {}_4R_x$ , find  $x$ .

1) \_\_\_\_\_

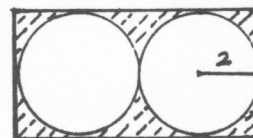
2) If  $2^k = x$ , then  $2^{k-3}$  is: a)  $\frac{x}{3}$  b)  $\frac{x}{6}$  c)  $\frac{x}{8}$  d)  $\sqrt[3]{x}$

2) \_\_\_\_\_

3) A cube has how many planes of symmetry?

3) \_\_\_\_\_

4) In the diagram at the right, the area of the shaded region is:



a)  $8(\pi-4)$  b)  $4(8-\pi)$  c)  $2(16-\pi)$  d)  $8(4-\pi)$

4) \_\_\_\_\_

5) A positive number, when divided by twice its reciprocal, is equal to 18. Find that number.

5) \_\_\_\_\_

6) Each different letter in the words "I am Nan" represents a different digit. Each time the same letter appears it represents the same digit. Each of the words represents a one-digit, a two-digit and a three-digit perfect square number and the sum of the digits for each of the two and three digit numbers is also a perfect square. (The three-digit perfect square is from the list: 100, 121, 144, 169, 196, 225, 256, 289, 324, 361, 400, 441, 484.) Find the 3 numbers that represent "I am Nan".

6) \_\_\_\_\_