Math 160 - Quiz 5 Name_____
Due Tuesday, Mar. 12th

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Evaluate the expression.

1) $8!$ 1) _____
A) 40,328 B) 40,312 C) 5040 D) 40,320

2) $\frac{12!}{7!}$ 2) _____
A) 84,000 B) 2! C) 95,040 D) $\frac{12}{7}$

3) ${}_5P_4$ 3) _____
A) 5 B) 24 C) 1 D) 120

4) ${}_8P_4$ 4) _____
A) 1680 B) 4 C) 70 D) 2

5) ${}_8C_3$ 5) _____
A) 56 B) 3 C) 112 D) 120

Solve the problem.

6) There are 13 members on a board of directors. If they must form a subcommittee of 5 members, how many different subcommittees are possible? 6) _____
A) 1287 B) 154,440 C) 120 D) 371,293

7) The library is to be given 7 books as a gift. The books will be selected from a list of 16 titles. If each book selected must have a different title, how many possible selections are there? 7) _____
A) 57,657,600 B) 112 C) 11,440 D) 268,435,456

8) How many 3-digit numbers can be formed using the digits 1, 2, 3, 4, 5, 6, 7 if repetition of digits is not allowed? 8) _____
A) 5 B) 343 C) 210 D) 6

9) How many ways can an IRS auditor select 4 of 12 tax returns for an audit? 9) _____
A) 11,880 B) 495 C) 24 D) 20,736

10) A musician plans to perform 7 selections. In how many ways can she arrange the musical selections? 10) _____
A) 49 B) 7 C) 5040 D) 40,320

11) A tourist in France wants to visit 8 different cities. How many different routes are possible? 11) _____
A) 64 B) 5040 C) 8 D) 40,320