

NAME: _____

How many ways are there to:

- a) Arrange seven books on a shelf?

$$7 \times 6 \times 5 \times \dots \times 1 \text{ or } 7! \text{ or } P(7, 7) = 5040$$

- b) Select 4 out of 10 paintings and hang them in a row on a wall?

$$10 \times 9 \times 8 \times 7 \text{ or } P(10, 4) = 5040$$

- c) Select 5 out of 30 students to form a study group?

$$C(30, 5) = 142,506$$