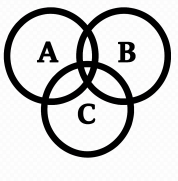
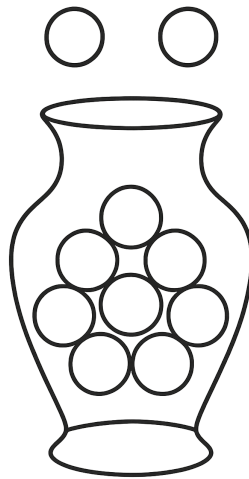
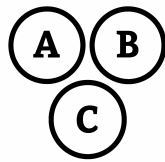


G

Combinations

G



$$m = 10$$

$$n = 2$$

$$\binom{m}{n} = \frac{m!}{n!(m-n)!} = \frac{10!}{2!(10-2)!} = \frac{10 \times 9}{2} = 45$$

?

$$m = 9$$

$$n = 3$$

$$a = 11$$

$$b = 4$$

$$\binom{m}{n} x \binom{a}{b} = ?$$

G

Combinations

G



$$m = 9$$

$$n = 3$$

$$a = 11$$

$$b = 4$$

$$\binom{m}{n}x^a = \frac{m!}{n!(m-n)!}x^{\frac{a!}{b!(a-b)!}} =$$

$$\frac{9!}{3!(9-3)!} \times \frac{11!}{4!(11-4)!} = \frac{9 \times 8 \times 7}{3 \times 2 \times 1} \times \frac{11 \times 10 \times 9 \times 8}{4 \times 3 \times 2 \times 1} = 84 \times 330 = 27,720$$