Counting: Permutations & Combinations · 1

Evaluate 6!

Counting: Permutations & Combinations · 2

In how many different orders can 7 books be placed on a shelf?

Counting: Permutations & Combinations · 3

Evaluate P(10, 4), the number of permutations of 10 things taken 4 at a time.

Counting: Permutations & Combinations · 4

9 runners race. In how many ways can the gold, silver and bronze medals be awarded?

Counting: Permutations & Combinations · 5

Evaluate 3!

Counting: Permutations & Combinations · 6

In how many different orders can 3 books be placed on a shelf?

Counting: Permutations & Combinations · 7

Evaluate P(6, 4), the number of permutations of 6 things taken 4 at a time.

Counting: Permutations & Combinations · 8

12 runners race. In how many ways can the gold, silver and bronze medals be awarded?

Counting: Permutations & Combinations · 2

ANSWER

5040

Counting: Permutations & Combinations · 1

ANSWER

720

Counting: Permutations & Combinations · 4

ANSWER

504

Counting: Permutations & Combinations · 3

ANSWER

5040

Counting: Permutations & Combinations · 6

ANSWER

6

Counting: Permutations & Combinations · 5

ANSWER

6

Counting: Permutations & Combinations · 8

ANSWER

1320

Counting: Permutations & Combinations · 7

ANSWER

360

Counting: Permutations & Combinations · 9

Evaluate 4!

Counting: Permutations & Combinations · 10

In how many different orders can 4 books be placed on a shelf?

Counting: Permutations & Combinations · 11

Evaluate P(6, 3), the number of permutations of 6 things taken 3 at a time.

Counting: Permutations & Combinations · 12

Evaluate C(9, 2), the number of combinations of 9 things taken 2 at a time.

Counting: Permutations & Combinations · 13

A club has 6 members. How many different 4-person committees can be chosen?

Counting: Permutations & Combinations · 14

Evaluate P(10, 2), the number of permutations of 10 things taken 2 at a time.

Counting: Permutations & Combinations · 15

Evaluate C(7, 4), the number of combinations of 7 things taken 4 at a time.

Counting: Permutations & Combinations · 16

5 runners race. In how many ways can the gold, silver and bronze medals be awarded?

Counting: Permutations & Combinations · 10

ANSWER

24

Counting: Permutations & Combinations · 9

ANSWER

24

Counting: Permutations & Combinations · 12

ANSWER

36

Counting: Permutations & Combinations · 11

ANSWER

120

Counting: Permutations & Combinations · 14

ANSWER

90

Counting: Permutations & Combinations · 13

ANSWER

15

Counting: Permutations & Combinations · 16

ANSWER

60

Counting: Permutations & Combinations · 15

ANSWER

35

Counting: Permutations & Combinations · 17

A club has 15 members. How many different 3-person committees can be chosen?

Counting: Permutations & Combinations · 18

Evaluate P(9, 4), the number of permutations of 9 things taken 4 at a time.

Counting: Permutations & Combinations · 19

Evaluate C(11, 4), the number of combinations of 11 things taken 4 at a time.

Counting: Permutations & Combinations · 20

Evaluate P(5, 3), the number of permutations of 5 things taken 3 at a time.

Counting: Permutations & Combinations · 21

Evaluate C(6, 2), the number of combinations of 6 things taken 2 at a time.

Counting: Permutations & Combinations · 22

A club has 7 members. How many different 2-person committees can be chosen?

Counting: Permutations & Combinations · 23

Evaluate P(10, 3), the number of permutations of 10 things taken 3 at a time.

Counting: Permutations & Combinations · 24

Evaluate C(5, 3), the number of combinations of 5 things taken 3 at a time.

Counting: Permutations & Combinations · 18

ANSWER

3024

Counting: Permutations & Combinations · 17

ANSWER

455

Counting: Permutations & Combinations · 20

ANSWER

60

Counting: Permutations & Combinations · 19

ANSWER

330

Counting: Permutations & Combinations · 22

ANSWER

21

Counting: Permutations & Combinations · 21

ANSWER

15

Counting: Permutations & Combinations · 24

ANSWER

10

Counting: Permutations & Combinations · 23

ANSWER

720