

Quelques réponses : Thème 14

14.1. Le principe de multiplication

Exercice 14.1: 24

Exercice 14.2: a) 256 b) 24

Exercice 14.3: a) 13'440 b) 5'376

Exercice 14.4: 177'147

Exercice 14.5: 2'880

Exercice 14.6: a) 2'340'000 b) 1'920'000

Exercice 14.7: a) 40'320 b) 50'400 c) 16'800

Exercice 14.8: a) 1'296 b₁) 360 b₂) 240

Exercice 14.9: 144

Exercice 14.10: 10^6

14.2. Les permutations

Exercice 14.11: 720

Exercice 14.12: 34'650 3'780

Exercice 14.13: 180

Exercice 14.14: 24

Exercice 14.15: 24

Exercice 14.16: 36

Exercice 14.17: a) 210 b) 40

14.3. Les arrangements

Exercice 14.18: 5'040

Exercice 14.19: a) 11'881'376 b) 7'893'600

Exercice 14.20: a) 6'720 b) 6'720

Exercice 14.21: a) 676 b) 677

Exercice 14.22: a) 6 b) 2

Exercice 14.23: 625

Exercice 14.24: 5'040

14.4. Les combinaisons

Exercice 14.25: 66

Exercice 14.26: 36

Exercice 14.27: 4'495

Exercice 14.28: 3'780

Exercice 14.29: a) 32 b) 1'008 c) 175'616

Exercice 14.30: a) 3'003 b) 980

Exercice 14.31: a) $8'145'060$
 b) $3'262'623 / 3'454'542 / 1'233'765 / 182'780 / 11'115 / 234 / 1$
 c) $194'130$ (donc 194'130 sur les 8'145'060 ce qui ne représente que 2,38% de chance !!)

14.5. Permutation - Arrangement - Combinaison lequel choisir ?

Exercice 14.32: a) 1'320 b) 220

Exercice 14.33: a) 220 b) 1'320 c) 1'728

Exercice 14.34: 216 / 72 / 72 / 36

Exercice 14.35: a) 45 b) 21 c) 25

Exercice 14.36: a) 10^5 b) 810

Exercice 14.37: a) 40'320 b) 10'080 c) 1'152

Exercice 14.38: 12'600

Exercice 14.39: 420

Exercice 14.40: a) 7'140 b) 24 c) 4'960 d) 2'180 e) 1'984

Exercice 14.41: 31

Exercice 14.42: a) 518'918'400 b) $2,092 \cdot 10^{13}$ c) 12'870

Exercice 14.43: a) 28'800 b) 100