

Week in Review #5

1. $4 * 3 * 2 * 1 = 4! = 24$
2. (a) $2 * 2 * 2 * 4 * 4 * 4 * 4 * 4 * 4 = 2^3 * 4^6$
(b) $3 * 3 * 3 * 5 * 5 * 5 * 5 * 5 * 5 = 3^3 * 5^6$
3. $4(2 * 1 * 1 * 3 * 2 * 1) = 48$
4. (a) $3 * 26 * 26 * 26 * 26 + 3 * 26 * 10 * 10 * 10 = 1448928$
(b) $3 * 25 * 24 * 23 * 22 + 3 * 25 * 10 * 9 * 8 = 964800$
5. $P(365, 10) = 365 * 364 * 363 * 362 * 361 * 360 * 359 * 358 * 357 * 356$
6. $365^{10} - P(365, 10)$
7. $4 * 10 * 10 * 5$
8. $4 * 10 * 10 * 5 - 5$
9. (a) 9,000
(b) 4,536
(c) 2,296
10. (a) $P(15, 7)$
(b) $15 * 1 * 1 * 1 * 14 * 13 * 12$
(c) $(15 * 1 * 14 * 13 * 12 * 11 * 10)21$
11. $(26 * 25 * 24 * 10 * 9) * 10$
12. (a) $4 * 4 * 4$
(b) $5 * 5 * 5 - 4 * 4 * 4$