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ME-I

1. (a) $2f(x)$
2. (a) 0
3. (d) ${}^m C_i {}^n C_{k-i}$
4. (c) three
5. (d) RMS > AM when numbers are not all equal.
6. (c) $\sum (-1)^j {}^k C_j f(x+k-j)$
7. (c) $n!_{n-1}$
8. (d) $(cx^2+bx+a) \mid 1 \ b \ c; \ x^2 \ c \ a; \ x \ a \ b \mid$
9. (b) 1 is never divisible by 4
10. (d) $98/153$
11. (c) $1/p + 1/q$
12. (c) always a positive number
13. (a) 36
14. (c) 2
15. (d) the function f must always have the property that $f(0) \in \{0, 1\}$, $f(1) \in \{0, 1\}$, and $f(0)+f(1)=1$