Homework 12

Chandler Swift

April 11, 2019

8 $26 \cdot 25 \cdot 24 = 15600$

10 $2^8 = 256$

16 $26^4 - 25^4 = 66351$

24 (a) 1000
(b) 4500
(c) 8100
(d) 6000
(e) 2829
(f) 6171
(g) 1543
(h) 257

32 (a) $26^8 = 208827064576$
(b) $\frac{26!}{(26-8)!} = 26 \cdot 25 \cdot 24 \cdot 23 \cdot 22 \cdot 21 \cdot 20 \cdot 19 = 62990928000$
(c) $26^7 = 8031810176$
(d) $\frac{25!}{(26-8)!} = 25 \cdot 24 \cdot 23 \cdot 22 \cdot 21 \cdot 20 \cdot 19 = 2422728000$
(e) $26^6 = 308915776$
(f) $26^6 = 308915776$
(g) $26^4 = 456976$
(h) $2 \cdot 26^6 = 617831552$

50 Assuming that the question is written to intend to exclude bit strings that both begin with two 0s and end with three 1s:

$2^5 + 2^4 - 2^2 = 44$

Otherwise, $2^5 + 2^4 = 48$.