

# Probability Review for ALL Levels

- ①  $C(25,3) = 2300$
- ②  $2 \cdot 3 + 1 \cdot 2 = 8$
- ③  $C(12,7) \cdot 2^5 = 792$
- ④  $P(23,19) = 1.077 \times 10^{21}$
- ⑤  $C(2,2) \cdot C(50,11) = 9.7354 \times 10^{10}$

- ⑥  $6^5 = 7776$
- ⑦  $6 \cdot 5 \cdot C(5,3) = 300$
- ⑧  $300/7776 = 2^5/648$
- ⑨  $P(8,3) = 336$
- ⑩ (A)  $6! = 720$
- (B)  $7! \cdot 2^7 = 645120$
- (C)  $6!/2 = 360$
- (D)  $7! = 5040$

- ⑪  $16!/(8!5!3!) = 720720$
- ⑫  $C(25,3) = 2300$
- ⑬  $14! = 8.7178 \times 10^{10}$
- ⑭  $14! - 13! \cdot 2 = 7.4724 \times 10^{10}$
- ⑮  $7!/(3!2!) = 420$
- ⑯  $C(7,4) \cdot C(10,6) = 7350$
- ⑰  $6! \cdot 3! = 4320$
- ⑱  $4! \cdot 5! = 2880$

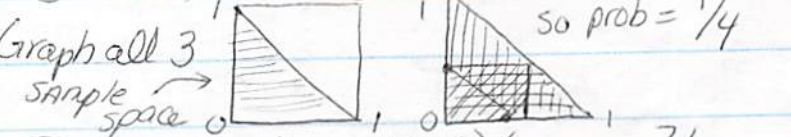
⑳ (A)  $8/15$   
 \* (B) should be "70%", 7:3  
 (C) should be "70%", 3:7

- ⑲  $\frac{5+4+3+2+1}{36} = 7/36 = 7/12$
- ⑳  $\{1,1,4\} \{1,2,3\} \{2,2,2\} \frac{3+6+1}{6 \cdot 6 \cdot 6} = 5/108$
- ㉑  $(5+11-2)/36 = 14/36 = 7/18$
- ㉒  $2^2/36 = 1/18$

- ㉓ (A)  $C(15,3)/C(20,3) = 91/228$
- (B)  $C(15,2) \cdot C(5,1) / C(20,3) = 35/76$
- (C)  $91/228 + 35/76 = 49/57$
- (D)  $C(5,3)/C(20,3) = 1/114$

- ㉔ (A)  $(.75)^3 = .421875 = 27/64$
- (B)  $C(3,1) \cdot (.25)^1 \cdot (.75)^2 = .421875 = 27/64$
- (C)  $C(3,2) \cdot (.25)^2 \cdot (.75)^1 = .140625 = 9/64$

㉕  $x, y, 1-x-y$  to be a  $\Delta$ ,  $0 < x < 1$ ,  $0 < y < 1-x$   
 $x+y > 1-x-y$ ,  $x+1-x-y > y$  and  $y+1-x-y > x$



- ㉖  $\{10,10\} \{10,5\}$  so  $(1+6)/C(10,2) = 7/45$
- ㉗ (A)  $\{2,3,5,7,11,13\} C(6,4)/C(15,4) = 1/91$
- (B)  $\{3 \text{ evens} + 1 \text{ odd}\}$  or  $\{3 \text{ odds} + 1 \text{ even}\}$   
 $(C(7,3) \cdot C(8,1) + C(8,3) \cdot C(7,1))/C(15,4) = 3^2/65$

㉘  $P(C \text{ and } A) = P(A) \cdot P(C/A)$  so  $.3 = .4 \cdot P(C/A)$   
 so  $P(C/A) = 3/4 = 75\%$

- ㉙ (A)  $(.4)^5 = 32/3125 = .01024$
- (B)  $1 - .6^5 = 2882/3125 = .92224$
- (C)  $C(5,2) \cdot (.4)^2 \cdot (.6)^3 = .3456 = 216/625$

- ㉚ (A)  $C(8,5)/C(20,5) = 7/1938$
- (B)  $1 - C(12,5)/C(20,5) = 613/646$
- (C)  $C(8,2) \cdot C(12,3)/C(20,5) = 385/969$

Maths 11A

$1000 = 1000 \cdot 1.05^x$  (1)

$1000 = 1000 \cdot 1.05^x$  (2)

$1000 = 1000 \cdot 1.05^x$  (3)

$1000 = 1000 \cdot 1.05^x$  (4)

$1000 = 1000 \cdot 1.05^x$  (5)

$1000 = 1000 \cdot 1.05^x$  (6)

$1000 = 1000 \cdot 1.05^x$  (7)

$1000 = 1000 \cdot 1.05^x$  (8)

$1000 = 1000 \cdot 1.05^x$  (9)

$1000 = 1000 \cdot 1.05^x$  (10)

$1000 = 1000 \cdot 1.05^x$  (11)

$1000 = 1000 \cdot 1.05^x$  (12)

$1000 = 1000 \cdot 1.05^x$  (13)

$1000 = 1000 \cdot 1.05^x$  (14)

$1000 = 1000 \cdot 1.05^x$  (15)

$1000 = 1000 \cdot 1.05^x$  (16)

$1000 = 1000 \cdot 1.05^x$  (17)

$1000 = 1000 \cdot 1.05^x$  (18)

$1000 = 1000 \cdot 1.05^x$  (19)

$1000 = 1000 \cdot 1.05^x$  (20)

$1000 = 1000 \cdot 1.05^x$  (21)

$1000 = 1000 \cdot 1.05^x$  (22)

$1000 = 1000 \cdot 1.05^x$  (23)

$1000 = 1000 \cdot 1.05^x$  (24)

$1000 = 1000 \cdot 1.05^x$  (25)

$1000 = 1000 \cdot 1.05^x$  (26)

$1000 = 1000 \cdot 1.05^x$  (27)

$1000 = 1000 \cdot 1.05^x$  (28)

$1000 = 1000 \cdot 1.05^x$  (29)

$1000 = 1000 \cdot 1.05^x$  (30)

$1000 = 1000 \cdot 1.05^x$  (31)

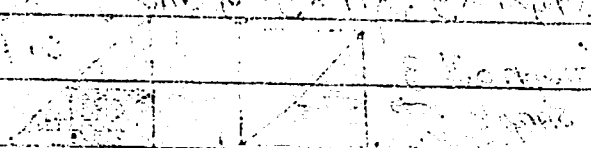
$1000 = 1000 \cdot 1.05^x$  (32)

$1000 = 1000 \cdot 1.05^x$  (33)

$1000 = 1000 \cdot 1.05^x$  (34)

$1000 = 1000 \cdot 1.05^x$  (35)

$1000 = 1000 \cdot 1.05^x$  (36)



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