$S_n = \frac{a_1(r^n-1)}{r-1}$

$13 = \frac{a_1(r^n-1)}{r-1}$

$30 = \frac{a_1(r^{2n}-1)}{r^2-1}$ — ①

$-2 = a_2 + a_4 + \ldots + a_{20} = \frac{a_2(r^{2n}-1)}{r^2-1}$ — ②

$\frac{a_2(r^{2n}-1)}{r^2-1} \cdot \frac{r^2-1}{a_1(r^{2n}-1)} = \frac{a_2}{a_1} = \frac{-2}{30} = -\frac{1}{15} = r$

$\frac{2(2^n-1)}{1} = 510$

$2^n - 1 = 255$

$2^n = 256$

$n = 8$

③ $a_1 + a_2 = 10$

$a_{n+2} = a_n + 3$

$a_{n+1} = a_{n-1} + 3$

$\therefore a_{n+1} + a_{n+2} = a_n + a_{n-1} + 6$

10 ↷ 16

40 → 20

$S_{20} = 10$

$a_n = 10 + (20-1)(6)$

$= 10 + 19 \cdot 6 = 124$

$S_{20} = (\frac{10+124}{2})(20) = 1340$

$11 \equiv 11 \pmod{1210}$

$11 \cdot 11 \cdot (11-1)$

$11^{111} = 1210 \cdot q + r$

$11^{111} = 11 \cdot 11 \cdot (10-1)q + r$

1331
1210
121

$11 \equiv 11 \pmod{1210}$

$11 \equiv$

$11^3 \equiv 1331 \pmod{1210}$

$11^2 \equiv 121 \pmod{1210}$

$11^3 \equiv 121 \pmod{1210}$

$11^4 \equiv$

$f(x) = 3x+1 \rightarrow f'(x) = 3$

$(f \circ g)'(x) = 3x^2+1 = f'(g(x)) \cdot g'(x)$

$3x^2+1 = 3 \cdot g'(x)$

$g'(x) = x^2 + \frac{1}{3} \rightarrow \int g'(x)dx = \frac{1}{3}x^3 + \frac{1}{3}x + C = g(0)$

$\frac{1}{3}x^3 + \frac{1}{3}x + 1$

$g(0) = 1$

$\int_0^1 (\frac{1}{3}x^3 + \frac{1}{3}x + 1) dx$

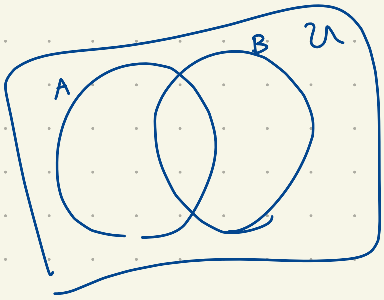
$= [\frac{1}{12}x^4 + \frac{1}{6}x^2 + x]_0^1$

$= \frac{1}{12} + \frac{1}{6} + 1 - 0 = \frac{1+2}{12} + 1 = \frac{3}{12} = \frac{5}{4}$

$1 - x < -\frac{3}{7}$ $\quad -\frac{3}{7} < 7 - x$

$1\frac{3}{7} < x$ $\quad x < 7\frac{3}{7}$

$1\frac{3}{7} < x < 7\frac{3}{7} \rightarrow \{2, 3, 4, 5, 6, 7\} \rightarrow 6$



$f(x)$ $\quad a(x+4)(x-2) = 0$

$f(-4)$ $\quad a(x^2+2x-8) = 0$

$a($

$A - B = A \cap B'$ $\quad 25\%\ A$

$(A \cap B') \cup (B \cap A')$ $\quad 75\%\ A +$

$=$

$-2x^2 - 4x + 16 = 0$

$-2(x^2+2x+1) + 18 = 0$

$N = f(x)$ $\quad f'(x) = \frac{8}{t+1}$

$\frac{f(x+3) - f(x)}{3} = \quad \frac{-8}{(3+1)^2} = -\frac{8}{16} = -\frac{1}{2}$

$\frac{140}{100} \cdot 800 = \frac{50}{100} \cdot x$

$\frac{140}{100} \cdot 800 \cdot 2 = x$

$\frac{x_{20} + x_{21}}{2} = \frac{62+60}{2} = 61$

2, 16, 140, 65, 160, 2240

16 $\quad$ 13:

$A = \{\phi, \{\phi\}, 0, \{0\}\}$

$P(A) = \{\phi, \{\phi\}, \{\{\phi\}\}, \{0\}, \{\{0\}\}, \{\phi, \{\phi\}\}, \{\phi, 0\}, \{\phi, \{0\}\}, \{\{\phi\}, 0\},$
$\{\{\phi\}, \{0\}\}, \{0, \{0\}\}, \{\phi, \{\phi\}, 0\}, \{\phi, \{\phi\}, \{0\}\}, \{\{\phi\}, 0, \{0\}\}, \{\phi, 0, \{0\}\},$
$\{\phi, \{\phi\}, 0, \{0\}\}\}$

96, 86, 76, 66, 56, 46, 36, 26, 16, 6 — b

19 / 97

b — 00, 02

66 $\quad$ 68

$\frac{\binom{8}{2}}{6 \cdot 7 \cdot 8} = \frac{\frac{8!}{2!6!}}{6 \cdot 7 \cdot 8} = \frac{\frac{8 \cdot 7}{2}}{6 \cdot 7 \cdot 8} = \frac{1}{12}$

$\binom{8}{1} \cdot \binom{7}{1} = \frac{8!}{7!1!} \cdot \frac{7!}{6!1!}$ $\quad \frac{8!}{6!}$

1 $\quad$ 8 $\quad$ 6

5 $\quad$ 15 $\quad$ 10

7 $\quad$ 9

81

$\frac{\binom{21}{8}\binom{8}{1} + \binom{20}{7}\binom{7}{1}}{\binom{21}{2}} =$

$ab = 30$

$\frac{4}{6} + \frac{1}{8} \cdot x = 1$

$\frac{1}{8}x = \frac{2}{6}$ $\quad x = \frac{8}{3}$

$\frac{1}{b} + \frac{b}{c} = \frac{8}{4} \cdot \frac{1}{2} = \frac{1}{8}$

$632a + 14b + c = 486$

$B = 3$ ตัว

$E =$ วงกลม / $F =$ สี่เหลี่ยม

$J =$

$7(9a + 2b) + c = 486$

$7(69) + 3 = 486$

$92+$

$(2, 3)$

$9(7)+$

$= \frac{\frac{21!}{8!13!} \cdot \frac{8!}{7!1!} + \frac{20!}{7!13!} \cdot \frac{7!}{6!1!}}{\frac{21!}{2!19!}} =$

2

$\frac{20! \cdot 2! \cdot 19!}{13! \, 7! \, 13! \, 6!}$

$\frac{1}{4} \cdot \frac{b}{a} + \frac{b}{b} + \frac{b}{c} = \frac{3}{4}$

$\frac{24}{a} = \frac{1}{24}$

$\frac{1}{b} + \frac{1}{c} = \frac{3}{24}$

$\frac{1}{a} + \frac{1}{b} + \frac{1}{c} =$

$16 + 3x = 24$

$3x = 8$

$x = \frac{8}{3}$

$(\frac{1}{6})4 + (\frac{3}{24})x = 1$

$\frac{16}{24} + \frac{3x}{}$

4 8 12 16 20 24

6 10 18 30 46 66

1 3 9 27

4 5 8 17 44

6 14 19 27 44 88

$12(\frac{1}{2})$

3 $\frac{17}{3}$ $\frac{315}{34}$

4 12 68 630

9

5 7 4 8 3

8 56 562

4 12 68 630

12(5) + 4(2)

68(5) + 12(2)