

上海交通大学在线考试诚信承诺书

SJTU Online Examination Honor Code Letter

考试不仅是对学习成效的检查，更是对道德品质的检验。自觉维护学校的考风考纪，营造公平、公正的考试环境是全体同学的责任和义务。特别在疫情防控的特殊时期，更应强化自律意识，恪守诚信，拒绝舞弊，做一名诚实守信的新时代大学生，用诚信的考试构筑诚信的人生。

Examination is the evaluation of both learning effect and morality. It is the responsibility and obligation of all students to consciously maintain the school's common examination practice, abide by the discipline and create a fair and just examination environment. Especially in the special period of epidemic prevention and control, we should strengthen the consciousness of self-discipline, abide by the integrity, refuse to cheat, be an honest and trustworthy college student in the new era, and build an honest life from the integrity test.

我郑重承诺 I solemnly promise:

(1) 本人将履约践诺，知行统一；遵从诚信规范，恪守学术道德；自尊自爱，自省自律。I will fulfill my promise, unify between knowledge and action, abide by the rules of integrity, academic ethics, be self-respected and self-disciplined.

(2) 在线考试过程中，自觉遵守学校和老师宣布的考试纪律（详见《上海交通大学本科生学生手册》中的《学生考试纪律规定》，沪交教【2019】28号），不剽窃，不违纪，不作弊。In the process of online examination, I will consciously abide by the examination discipline announced by the school and the teachers (see the regulations on student examination discipline in the undergraduate student handbook of Shanghai Jiao Tong University, HJJ [2019] No. 28), and do not plagiarize, violate discipline or cheat.

(3) 若违反相关考试规定和纪律要求，自愿接受学校的严肃处理或处分。In case of violation of relevant examination regulations and discipline, students shall bear the serious treatment or punishment from the school.

承诺人 Committed by: 钱翔云

(学号 Student No: 52030910366)

日期 Date (Y/M/D): 2023年 1月 5日

成績 _____

[illegible]

Obviously B can effectively list P without repetition.
Therefore, P is effectively enumerable.

三(2) 见下页

上海交通大学 答题纸

(20__ 至 20__ 学年 第__ 学期)

课程名称 _____

姓名 钱翔云

121. Suppose algorithm C and D can effectively list A and B .

Then we construct the following algorithm:

Initial $A-s, B-s$, as ϕ

for $i=1, 2, \dots$:

for one iteration.

run algorithm C and D get a output.

$A-o, B-o = \text{output}$.

If $A-o$ in $B-s$ ~~and $A-o$ not in D~~

print $A-o$

$D \leftarrow D \cup \{A-o\}$

$A-s \leftarrow A-s \cup \{A-o\}$

If $B-o$ in $A-s$ and ~~not in D~~ :

print $B-o$

$D \leftarrow D \cup \{B-o\}$

$B-s \leftarrow B-s \cup \{B-o\}$

~~$A-s \leftarrow A-s \cup \{A-o\}$~~

~~$B-s \leftarrow B-s \cup \{B-o\}$~~

Obviously the above algorithm can effectively ~~enumerate~~ list $A \cap B$ without repetition. Because if $A-o$ in $B-s$ will output in first order and $B-o$ will output in second order.

Therefore, $A \cap B$ is effectively enumerable.

if they not in D
(还没出现性).

上海交通大学答题纸

(20__ 至 20__ 学年 第__ 学期)

课程名称 _____

姓名 钱翔云四 (1). $\Sigma \models \alpha$ \Leftrightarrow ~~if~~ for any truth assignment v if v s.t. Σ , then v s.t. α . \Leftrightarrow for any truth assignment v if v s.t. λ for all $\lambda \in \Sigma$, then v s.t. α .① for any truth assignment v , if v s.t. $\Sigma \cup \Delta$, which means:1. v satisfies all wffs $\lambda \in \Sigma \cup \Delta$. (v s.t. all wffs $\lambda \in \Sigma$) $\wedge \Sigma \models \alpha$.
~~②~~ v satisfies $\alpha \Rightarrow \Sigma \cup \Delta \models \alpha$.2. v satisfies all wffs $\lambda \in \Sigma \cup \Delta$ (v s.t. all wffs $\lambda \in \Delta$)
 \wedge from 1 we know v s.t. α . $\therefore v$ s.t. $\Delta \cup \{\alpha\} \wedge \Delta \cup \{\alpha\} \models \beta$ $\therefore v$ s.t. $\beta \Rightarrow \Sigma \cup \Delta \models \beta$.Therefore, if $\Sigma \models \alpha$ and $\Delta \cup \{\alpha\} \models \beta$, then $\Sigma \cup \Delta \models \beta$.

(2).

$$\begin{array}{c}
 \frac{\frac{\frac{\{\alpha\}}{\alpha} \text{V-I} \quad \frac{\frac{\{\beta\} \models \beta}{\beta} \text{V-I}}{\alpha \vee \beta} \text{V-E} \quad \frac{\frac{\{\beta\} \models \beta}{\beta} \text{V-I}}{\beta} \text{V-E}}{\alpha \vee \beta} \text{V-E} \quad \frac{\frac{\{\gamma\}}{\gamma} \text{V-I} \quad \frac{\frac{\{\beta\} \models \beta}{\beta} \text{V-I}}{\gamma \vee \beta} \text{V-E}}{\gamma \vee \beta} \text{V-E} \\
 \frac{\frac{\{\beta \vee \neg \beta\}}{\beta \vee \neg \beta} \quad \frac{\alpha \vee \beta}{\alpha \vee \beta} \quad \frac{\gamma \vee \beta}{\gamma \vee \beta}}{\alpha \vee \beta} \text{V-E} \\
 \alpha \vee \beta
 \end{array}$$

上海交通大学答题纸

(20__ 至 20__ 学年 第__ 学期)

课程名称 _____

姓名 饶翔云

$$5.11). \exists x P_x \rightarrow Q_x$$

\Leftrightarrow ~~There exists~~ x , ~~if~~ P_x then Q_x . (if)

$$\forall x (P_x \rightarrow \exists y Q_y)$$

\Leftrightarrow for any x , if P_x then $\exists y Q_y$

\Leftrightarrow for any x , if P_x , then there exists y , Q_y .

from ~~we~~ we know There exists x , if P_x then Q_x

\Leftrightarrow ^{if} There exists x ~~if~~ P_x then there exists x Q_x

\Leftrightarrow if there exists x P_x then there exists y Q_y

$$\Leftrightarrow \exists x P_x \Rightarrow \exists y Q_y.$$

from above we know, if ~~P_x~~ x ~~P_x~~ , then $\exists y Q_y$.

Therefore, $\forall x (P_x \rightarrow \exists y Q_y)$ holds.

12) a. $\{1\}$ is definable with. $\forall V_2 V_2 \dot{x} V_1 = V_2$.

b. mark a's formula as p , replace V_1 in p as x , and read $p(x)$.

Then we can define $\{2\}$ with $\forall V_2 p(V_2) \wedge (V_1 \dot{x} V_1 = V_2 + V_2)$

上海交通大学 答题纸

(20__ 至 20__ 学年 第__ 学期)

课程名称 _____

姓名 钱翔云五 13). Suppose h as the homomorphism function. $h(n) = \begin{cases} 2n-1, & n > 0 \\ 0, & n = 0 \\ -2n, & n < 0 \end{cases}$

~~1. $h(0^n) = 0 = 0^3 = 0^3$~~

~~$h(1^n) = 1 = 1^3 = 1^3$~~

~~2. $h(a+b) = h(a) + h(b) =$~~

~~$h(n) = n. \quad h(1^n) = 1^3 \quad h(x^n) = x^3$~~

~~1. $h(0^n) = h(0) = 0 = 0^3$~~

~~$h(1^n) = 1 = 1^3$~~

~~2. $h(a+b) = h(a) + h(b) = a + b = h(a+b) = a+b$~~

~~$h(ax^n b) = h(a)x^3 h(b) = ax^3 b = axb = h(ax^n b)$~~

~~$h(ax^n b) = h(axb) = axb$~~

✗ 不要

∴ homomorphism doesn't require surjective.

∴ $h(n)$ s.t the requirement of homomorphism

课程名称

姓名

$$(\alpha \rightarrow (\beta \wedge \gamma))$$

1. A-70.1

Infinite

10.12.12

★ 劉家

11. 11. 11.

12. $\neg(B \rightarrow C) \rightarrow A$

~~14012-11-11~~
$$v_1 = \frac{1}{\sqrt{2}} \begin{pmatrix} 1 \\ i \end{pmatrix}$$

姓名

$$S_1, \cup(b) \times (b|z|c)$$
$$S_2(x_1, x_2, x_3, x_4)$$
$$\begin{array}{c} 2n-1 \\ 0 \\ \rightarrow 2n+1 \end{array}$$

4. If some is play video, the movie is.

$$x \in \mathcal{P}_x \cap \mathcal{Q} \cap \mathcal{A} \rightarrow x \in \mathcal{P}_x \cap \mathcal{Q} \cap \mathcal{A}.$$
$$V_1 \times V_1, V_1 \times V_2,$$

ϕ is prov, \neg provable.

2-11-11

$$p(V_1) \cap p(V_2) = V_1 + V_2$$
$$\frac{1}{2} \sqrt{1+x}$$
$$\frac{1}{2} \sqrt{2}$$
$$\sqrt{n/2} = 0$$
$$\{B_{V-1/3}\}$$

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$$\frac{1}{\sqrt{2}}$$
$$\frac{1}{11}$$
$$A^T A X = A^T b$$
$$v_1 \cdot x \cdot v_1 < v_1$$

1. ~~1.1~~ ~~1.2~~ ~~1.3~~ ~~1.4~~ ~~1.5~~ ~~1.6~~ ~~1.7~~ ~~1.8~~ ~~1.9~~ ~~1.10~~ ~~1.11~~ ~~1.12~~ ~~1.13~~ ~~1.14~~ ~~1.15~~ ~~1.16~~ ~~1.17~~ ~~1.18~~ ~~1.19~~ ~~1.20~~ ~~1.21~~ ~~1.22~~ ~~1.23~~ ~~1.24~~ ~~1.25~~ ~~1.26~~ ~~1.27~~ ~~1.28~~ ~~1.29~~ ~~1.30~~ ~~1.31~~ ~~1.32~~ ~~1.33~~ ~~1.34~~ ~~1.35~~ ~~1.36~~ ~~1.37~~ ~~1.38~~ ~~1.39~~ ~~1.40~~ ~~1.41~~ ~~1.42~~ ~~1.43~~ ~~1.44~~ ~~1.45~~ ~~1.46~~ ~~1.47~~ ~~1.48~~ ~~1.49~~ ~~1.50~~ ~~1.51~~ ~~1.52~~ ~~1.53~~ ~~1.54~~ ~~1.55~~ ~~1.56~~ ~~1.57~~ ~~1.58~~ ~~1.59~~ ~~1.60~~ ~~1.61~~ ~~1.62~~ ~~1.63~~ ~~1.64~~ ~~1.65~~ ~~1.66~~ ~~1.67~~ ~~1.68~~ ~~1.69~~ ~~1.70~~ ~~1.71~~ ~~1.72~~ ~~1.73~~ ~~1.74~~ ~~1.75~~ ~~1.76~~ ~~1.77~~ ~~1.78~~ ~~1.79~~ ~~1.80~~ ~~1.81~~ ~~1.82~~ ~~1.83~~ ~~1.84~~ ~~1.85~~ ~~1.86~~ ~~1.87~~ ~~1.88~~ ~~1.89~~ ~~1.90~~ ~~1.91~~ ~~1.92~~ ~~1.93~~ ~~1.94~~ ~~1.95~~ ~~1.96~~ ~~1.97~~ ~~1.98~~ ~~1.99~~ ~~1.100~~ ~~1.101~~ ~~1.102~~ ~~1.103~~ ~~1.104~~ ~~1.105~~ ~~1.106~~ ~~1.107~~ ~~1.108~~ ~~1.109~~ ~~1.110~~ ~~1.111~~ ~~1.112~~ ~~1.113~~ ~~1.114~~ ~~1.115~~ ~~1.116~~ ~~1.117~~ ~~1.118~~ ~~1.119~~ ~~1.120~~ ~~1.121~~ ~~1.122~~ ~~1.123~~ ~~1.124~~ ~~1.125~~ ~~1.126~~ ~~1.127~~ ~~1.128~~ ~~1.129~~ ~~1.130~~ ~~1.131~~ ~~1.132~~ ~~1.133~~ ~~1.134~~ ~~1.135~~ ~~1.136~~ ~~1.137~~ ~~1.138~~ ~~1.139~~ ~~1.140~~ ~~1.141~~ ~~1.142~~ ~~1.143~~ ~~1.144~~ ~~1.145~~ ~~1.146~~ ~~1.147~~ ~~1.148~~ ~~1.149~~ ~~1.150~~ ~~1.151~~ ~~1.152~~ ~~1.153~~ ~~1.154~~ ~~1.155~~ ~~1.156~~ ~~1.157~~ ~~1.158~~ ~~1.159~~ ~~1.160~~ ~~1.161~~ ~~1.162~~ ~~1.163~~ ~~1.164~~ ~~1.165~~ ~~1.166~~ ~~1.167~~ ~~1.168~~ ~~1.169~~ ~~1.170~~ ~~1.171~~ ~~1.172~~ ~~1.173~~ ~~1.174~~ ~~1.175~~ ~~1.176~~ ~~1.177~~ ~~1.178~~ ~~1.179~~ ~~1.180~~ ~~1.181~~ ~~1.182~~ ~~1.183~~ ~~1.184~~ ~~1.185~~ ~~1.186~~ ~~1.187~~ ~~1.188~~ ~~1.189~~ ~~1.190~~ ~~1.191~~ ~~1.192~~ ~~1.193~~ ~~1.194~~ ~~1.195~~ ~~1.196~~ ~~1.197~~ ~~1.198~~ ~~1.199~~ ~~1.200~~ ~~1.201~~ ~~1.202~~ ~~1.203~~ ~~1.204~~ ~~1.205~~ ~~1.206~~ ~~1.207~~ ~~1.208~~ ~~1.209~~ ~~1.210~~ ~~1.211~~ ~~1.212~~ ~~1.213~~ ~~1.214~~ ~~1.215~~ ~~1.216~~ ~~1.217~~ ~~1.218~~ ~~1.219~~ ~~1.220~~ ~~1.221~~ ~~1.222~~ ~~1.223~~ ~~1.224~~ ~~1.225~~ ~~1.226~~ ~~1.227~~ ~~1.228~~ ~~1.229~~ ~~1.230~~ ~~1.231~~ ~~1.232~~ ~~1.233~~ ~~1.234~~ ~~1.235~~ ~~1.236~~ ~~1.237~~ ~~1.238~~ ~~1.239~~ ~~1.240~~ ~~1.241~~ ~~1.242~~ ~~1.243~~ ~~1.244~~ ~~1.245~~ ~~1.246~~ ~~1.247~~ ~~1.248~~ ~~1.249~~ ~~1.250~~ ~~1.251~~ ~~1.252~~ ~~1.253~~ ~~1.254~~ ~~1.255~~ ~~1.256~~ ~~1.257~~ ~~1.258~~ ~~1.259~~ ~~1.260~~ ~~1.261~~ ~~1.262~~ ~~1.263~~ ~~1.264~~ ~~1.265~~ ~~1.266~~ ~~1.267~~ ~~1.268~~ ~~1.269~~ ~~1.270~~ ~~1.271~~ ~~1.272~~ ~~1.273~~ ~~1.274~~ ~~1.275~~ ~~1.276~~ ~~1.277~~ ~~1.278~~ ~~1.279~~ ~~1.280~~ ~~1.281~~ ~~1.282~~ ~~1.283~~ ~~1.284~~ ~~1.285~~ ~~1.286~~ ~~1.287~~ ~~1.288~~ ~~1.289~~ ~~1.290~~ ~~1.291~~ ~~1.292~~ ~~1.293~~ ~~1.294~~ ~~1.295~~ ~~1.296~~ ~~1.297~~ ~~1.298~~ ~~1.299~~ ~~1.300~~ ~~1.301~~ ~~1.302~~ ~~1.303~~ ~~1.304~~ ~~1.305~~ ~~1.306~~ ~~1.307~~ ~~1.308~~ ~~1.309~~ ~~1.310~~ ~~1.311~~ ~~1.312~~ ~~1.313~~ ~~1.314~~ ~~1.315~~ ~~1.316~~ ~~1.317~~ ~~1.318~~ ~~1.319~~ ~~1.320~~ ~~1.321~~ ~~1.322~~ ~~1.323~~ ~~1.324~~ ~~1.325~~ ~~1.326~~ ~~1.327~~ ~~1.328~~ ~~1.329~~ ~~1.330~~ ~~1.331~~ ~~1.332~~ ~~1.333~~ ~~1.334~~ ~~1.335~~ ~~1.336~~ ~~1.337~~ ~~1.338~~ ~~1.339~~ ~~1.340~~ ~~1.341~~ ~~1.342~~ ~~1.343~~ ~~1.344~~ ~~1.345~~ ~~1.346~~ ~~1.347~~ ~~1.348~~ ~~1.349~~ ~~1.350~~ ~~1.351~~ ~~1.352~~ ~~1.353~~ ~~1.354~~ ~~1.355~~ ~~1.356~~ ~~1.357~~ ~~1.358~~ ~~1.359~~ ~~1.360~~ ~~1.361~~ ~~1.362~~ ~~1.363~~ ~~1.364~~ ~~1.365~~ ~~1.366~~ ~~1.367~~ ~~1.368~~ ~~1.369~~ ~~1.370~~ ~~1.371~~ ~~1.372~~ ~~1.373~~ ~~1.374~~ ~~1.375~~ ~~1.376~~ ~~1.377~~ ~~1.378~~ ~~1.379~~ ~~1.380~~ ~~1.381~~ ~~1.382</~~

8. 14. 17

$$\sqrt{11} \sqrt{21} \sqrt{11} \sqrt{21}$$

9. $\sqrt{11}$ \checkmark $\sqrt{11}$ \checkmark $\sqrt{11}$ \checkmark

△ 金 人

△ 5/15/4

3. 5. 17

$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$ $\frac{1}{5}$ $\frac{1}{6}$ $\frac{1}{7}$ $\frac{1}{8}$ $\frac{1}{9}$ $\frac{1}{10}$ $\frac{1}{11}$ $\frac{1}{12}$ $\frac{1}{13}$ $\frac{1}{14}$ $\frac{1}{15}$ $\frac{1}{16}$ $\frac{1}{17}$ $\frac{1}{18}$ $\frac{1}{19}$ $\frac{1}{20}$ $\frac{1}{21}$ $\frac{1}{22}$ $\frac{1}{23}$ $\frac{1}{24}$ $\frac{1}{25}$ $\frac{1}{26}$ $\frac{1}{27}$ $\frac{1}{28}$ $\frac{1}{29}$ $\frac{1}{30}$ $\frac{1}{31}$ $\frac{1}{32}$ $\frac{1}{33}$ $\frac{1}{34}$ $\frac{1}{35}$ $\frac{1}{36}$ $\frac{1}{37}$ $\frac{1}{38}$ $\frac{1}{39}$ $\frac{1}{40}$ $\frac{1}{41}$ $\frac{1}{42}$ $\frac{1}{43}$ $\frac{1}{44}$ $\frac{1}{45}$ $\frac{1}{46}$ $\frac{1}{47}$ $\frac{1}{48}$ $\frac{1}{49}$ $\frac{1}{50}$ $\frac{1}{51}$ $\frac{1}{52}$ $\frac{1}{53}$ $\frac{1}{54}$ $\frac{1}{55}$ $\frac{1}{56}$ $\frac{1}{57}$ $\frac{1}{58}$ $\frac{1}{59}$ $\frac{1}{60}$ $\frac{1}{61}$ $\frac{1}{62}$ $\frac{1}{63}$ $\frac{1}{64}$ $\frac{1}{65}$ $\frac{1}{66}$ $\frac{1}{67}$ $\frac{1}{68}$ $\frac{1}{69}$ $\frac{1}{70}$ $\frac{1}{71}$ $\frac{1}{72}$ $\frac{1}{73}$ $\frac{1}{74}$ $\frac{1}{75}$ $\frac{1}{76}$ $\frac{1}{77}$ $\frac{1}{78}$ $\frac{1}{79}$ $\frac{1}{80}$ $\frac{1}{81}$ $\frac{1}{82}$ $\frac{1}{83}$ $\frac{1}{84}$ $\frac{1}{85}$ $\frac{1}{86}$ $\frac{1}{87}$ $\frac{1}{88}$ $\frac{1}{89}$ $\frac{1}{90}$ $\frac{1}{91}$ $\frac{1}{92}$ $\frac{1}{93}$ $\frac{1}{94}$ $\frac{1}{95}$ $\frac{1}{96}$ $\frac{1}{97}$ $\frac{1}{98}$ $\frac{1}{99}$ $\frac{1}{100}$