

● 解答はすべて解答用紙に記入しなさい。ただし、Ⅰ～Ⅴは共通問題です。

Ⅵ・Ⅶは選択問題です。普通科・商業科志望者はⅥを、特進コース志望者はⅦを解答しなさい。

Ⅰ 次のAyakaさんのタイ王国への研修旅行の英文を読んで、あとの問いに答えなさい。(共通問題)

We, the two high school students and one teacher arrived at Suvarnabhumi International Airport, Thailand (1) July 19, 2009. Two teachers from our sister school, Khema Siri Memorial School in Bangkok ①[meet] us at the airport. We arrived at the school (2) car and it was just midnight. But five students in the dormitory of the school welcomed us (ア)()() the building. They helped us carry our bags to the guest room. We were very glad to be welcomed warmly. We went to bed at one o'clock in the morning. We had a good sleep.

We got (3) at six. Two students in the dormitory showed us to the dining room. Many students had already sat down at the table. They are seven to eighteen years old. About two hundred and seventy students live in the dormitory.

After we had Thai food with various kinds of fruit for breakfast, the two students showed us to the school library. When I went there, (イ)(a desk for us / I / there was / to find that/ was surprised). Our name plate was on the desk. Then we went to the seminar room for a welcome ceremony.

After the welcome ceremony, we learned how to make a garland. It was difficult, but I made it. It was the first time, but it was very interesting and exciting experience for me.

Next, we had a Thai massage from the students at Khema Siri Memorial School. The students were the same age (4) us. So, I couldn't believe how well they could do massage. But they really did well. I felt ②[relax] by having a massage.

The next day, early in the morning, I woke up to hear someone cleaning the garden in the campus (5) a bamboo broom. About 6:30 in the morning, I went to the classroom for the second year of the elementary school and a few students had already come to school and they were at their desks. It was a ③[surprise] experience for me. In Bangkok, the traffic is very busy, so most of the students come to school early in the morning (2) car. School starts (6) 8:30, but they come to school early and study in the classroom or at desks under the trees.

After studying English, we did Thai cooking. The dish was green curry (7) chicken. We used many kinds of ingredients such (4) sliced chicken, coconut milk, green curry paste, sliced chili, lime leaves, palm sugar, fish sauce, and so on. The dish was rich, spicy food. We enjoyed this delicious food very much.

We stayed in Thailand for five days; (ウ) days in the dormitory and one day with a family. We could study Thai culture and many other things. We learned Thai customs through many activities. We could stay at a family (エ) daughter came to Japan in April, 2009. It was a wonderful and exciting experience for us. Through the exchange, we were able to deepen our understanding of Thailand and friendship between our school and Khema Siri Memorial School. (オ)Through the program, I learned very interesting things. In Thailand, people respect their King and love their country. There is a picture of the King in the classroom and every place in the city. We can see national flags everywhere. We can also hear the national anthem of Thailand through speakers all around the country twice a day; at eight in the morning and at six in the evening. When people hear the song, they stop ④[work]. And they all stand up and stand toward the flag. They sing to the music (8) a loud voice.

※ dormitory:寮 garland:花輪 campus:キャンパス bamboo broom:竹ぼうき traffic:交通 ingredient:食材
spicy:香辛料の香がする deepen:深める national anthem:国歌

1 (1)～(8)に入る適切な語を下の語群から選び記号で答えなさい。同じものを使ってもかまいません。

① as ② at ③ by ④ in ⑤ on ⑥ up ⑦ with

2 (ア)の「～の前で」の意味に合うように英語3語で答えなさい。

3 (イ)「われわれのために机が用意されているのを知って驚いた」の意味に合うように、英語を並べかえ英文を完成しなさい。

4 (ウ)に適切な数字を英語で入れなさい。

5 (エ)に適切な関係代名詞を入れなさい。

6 下線部(オ)は具体的にはどんなことを言っているか。解答欄(1)～(3)の空所にわかりやすく日本語で答えなさい。

7 ①[]～④[]内の動詞を適切な形になおしなさい。

8 次の質問に主語と動詞を使った英文で答えなさい。

(1) How old are the students in the dormitory?

(2) How many students live in the dormitory?

(3) Why do most of the students come to school early in the morning? *

(4) What picture is there in the classroom?

II 次の会話文の空所に入れるのに最も適当なものを1～3の中から1つ選び、その番号で答えなさい。(共通問題)

(1) A: I would like to talk to you. Do you have some time?

B: ()

1. Yes, it's ten o'clock.
2. Yes, I have about twenty minutes.
3. No, I don't have a watch.

(2) A: May I help you?

B: Yes, please. I'm looking for a present for my mother.

A: Do you have anything in mind?

B: ()

1. Nothing in particular.
2. Show me another one.
3. It looks nice.

(3) A: What's wrong with you?

B: Don't worry. I'm O.K.

A: I think you may be sick.

B: ()

1. Take care.
2. Thank you. But I'm O.K.
3. No, thank you.

III (1)～(4)の単語の中で、下線部の発音が他と異なるものを一つ選び、その番号を答えなさい。

- (1) (1. clear 2. hear 3. near 4. wear 5. year)
- (2) (1. beside 2. bright 3. idea 4. kind 5. police)
- (3) (1. butter 2. full 3. judge 4. punish 5. uncle)
- (4) (1. easy 2. horse 3. lose 4. musician 5. news)

IV 次の日本語の表す英文となるように、()内の語(句)を並べかえて正しい英文を作った時、3番目と5番目に来る語(句)を答えなさい。但し、文頭に来る語も小文字にしてあります。

(1) 彼女がいつニュージーランドに行くかわかりますか。

(do, know, to New Zealand, she, you, when, will go)?

(2) 昨夜何時に寝ましたか。

(did, go, time, to bed, what, you, last night)?

(3) 駅へ行く道を教えてくださいませんか。

(me, tell, the station, the way, to, will, you)?

(4) できるだけ早く帰宅したほうがよい。

You (as, better, can, go, had, home, soon as, you).

(5) 英語を上手に話すことは私にはとても難しい。

(is, difficult, for me, English, it, to speak, very, well).

V 次の各組の文がほぼ同じ意味になるように、()の中に適語を入れなさい。

(1) Mary is good at cooking.

Mary is a good ().

(2) Jane can run faster than her sister.

Her sister cannot run as ()() Jane.

(3) Susie likes music very much.

Susie is very ()() music.

(4) She cannot drive a car.

She doesn't know ()() drive a car.

(5) English is spoken in Canada.

()() English in Canada.

※ 次の問題からは選択問題です。普通科・商業科志望者はⅥを、特進コース志望者はⅦを解答しなさい。

(普通科・商業科志望者は次のⅥを解答しなさい)

Ⅵ 次の英文を読んで、あとの問いに答えなさい。

Mike was a small boy, and he hated soap and water. Three or four times every day his mother said to him, "Mike, your hands are very dirty again. Go and wash them." But Mike never really washed them well. He only put his hands in the water for a few seconds and then took them out again.

Mike's uncle and aunt lived in another city. One day they came to stay with Mike's parents, and they brought their small son, Ted, with them. Ted was a year younger than Mike, and he didn't like soap and water, either.

The boys sat with their parents for a few minutes, but then they went outside. When they were alone, Mike looked at Ted's hands and then said proudly, "My hands are dirtier than yours!"

"Of course they are," Ted answered angrily. "You're a year older than I am."

問1 次の(1)～(4)の前半部分に続けて、本文の内容に一致するように後半部分を1～3より1つ選び、番号で答えなさい。

- (1) Mike never really washed his hands well because
1. his hands were not dirty.
 2. his mother never told him to wash his hands.
 3. he didn't like soap and water.
- (2) When Mike's mother sent him to wash his hands,
1. he washed them three or four times.
 2. he said that his hands were not dirty.
 3. he only put his hands in the water.
- (3) Mike's uncle and aunt came
1. to live in another city.
 2. to stay with Mike's parents.
 3. to see Ted.
- (4) After Mike and Ted sat with their parents for a few minutes,
1. they went to another place.
 2. Ted looked at Mike's hands.
 3. Ted said that his hands were dirtier than Mike's hands.

問2 次の1～9の文の中から本文の内容に一致するものを4つ選び、若い番号順に答えなさい。

1. Mike did not like washing.
2. When Mike's mother sent Mike to wash his hands, he washed them carefully.
3. Mike's uncle and aunt lived near Mike.
4. Ted's father was Mike's uncle.
5. Mike's mother was Ted's uncle.
6. Mike was younger than Ted.
7. Ted did not like washing.
8. Ted's hands were dirtier than Mike's.
9. Mike's hands were dirtier than Ted's.

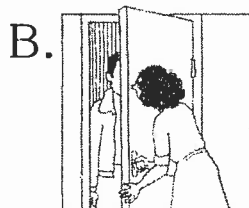
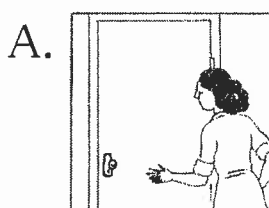
問3 次の英文は、下の絵A～Cの内、どの絵を表しているか。記号で答えなさい。

1. Mike has washed his hands in the water.



問4 次の英文は、下の絵A～Cの内、どの絵を表しているか。記号で答えなさい。

1. Mike's mother is going to open the door.



(特進コース志望者は次のⅦを解答しなさい)

Ⅶ 次の英文を読んで、あとの問いに答えなさい。

On January 24, 1988, Joel Gonzalez kissed his wife goodbye. Joel was a fisherman, and he was going on a short fishing trip. "I'll see you in a week," he said. But Joel did not see his wife in a week. He did not see his wife again for a long, long time.

Joel left his house and went to the harbor in Puntarenas, Costa Rica. He got on a fishing boat. Four other fishermen were on the boat, too. The boat left the harbor, and the men began to fish.

The first few hours on the ocean were not unusual. Then there was a terrible storm. The storm continued for 22 days. When the storm finally stopped, the men checked their boat. Their fishing nets were gone. The engine and radio didn't work. There was no food, and there was no fresh water.

Without their nets, the men couldn't fish. But they could reach out of the boat and catch big turtles. The men didn't want to eat raw turtle meat, so they needed a fire for cooking. They tore down the the boat's wood cabin and made a fire with pieces of the cabin.

They needed protection from the sun and rain, so they built a simple roof. The roof held rainwater, too. The men could drink rainwater from the roof.

For the next few months the men ate turtles—when they caught them. They drank rainwater—when it rained. Often there was no food and no water, and the men were hungry and thirsty. Sometimes they thought, "We are going to die soon."

Joel wrote a letter to his wife. "My dear Edith," Joel wrote. "If I die, I hope someone will send you this letter. Then you will know how I died. I had the best in life—a great woman and beautiful children. I love you, Edith. I love you."

In June it didn't rain for a long time, and the men ran out of water. They were thin and weak, and they thought, "We are going to die now." They put on their best clothes, lay down, and closed their eyes. After a while it began to rain. The men stood up and licked the water from the roof. Then all five men began to cry.

Ten days later, on June 15, a Japanese fishing boat found the men. They were 4,000 miles from Costa Rica.

Nobody sent Joel's letter to his wife. He showed it to his wife himself. Joel will always keep the letter. The letter, he says, helps him remember. "On the ocean I realized that I love my wife and children very, very much. () I don't want to forget that."

問1 次の(1)～(4)の前半部分に続けて、本文の内容に一致するように後半部分を1～4より1つ選び、番号で答えなさい。

- (1) When the storm finally stopped, the fishermen found that
 1. there were still no problems with their boat.
 2. the engine worked well.
 3. there was much fresh water left.
 4. they couldn't fish any more.
- (2) At first they didn't want to eat turtle meat because
 1. they had never eaten any.
 2. it was not cooked.
 3. it was not good.
 4. they felt sorry for the turtles.
- (3) They tore down the boat's cabin
 1. to make a fire with the wood.
 2. to protect themselves from the sun and rain.
 3. to drink rainwater from the roof.
 4. to dry turtles in the sun.
- (4) Joel wrote a letter to his wife to tell her
 1. how deeply he loved his family.
 2. how hard he was trying to fix the boat.
 3. how terrible the storm was.
 4. how beautiful the sunsets were.

問2 次の1～10の文の中から本文の内容に一致するものを4つ選び、若い番号順に答えなさい。

1. Joel is not married.
2. They left Puntarenas to go on a sightseeing trip.
3. There were five fishermen on the boat.
4. Twenty days after they left Puntarenas, they met with a terrible storm.
5. They were able to catch turtles without their nets.
6. They got rainwater from the roof on the boat.
7. In June they had a lot of rain.
8. There was often no food or water, but they could survive.
9. It was in July that they were saved.
10. They put on their best clothes to go back to their hometown.

問3 本文の最後の行の()の部分に入れるのに最もふさわしいものを選び番号で答えなさい。

1. My children can't understand my experience.
2. My wife helps me write letters.
3. My wife waits for me to come back.
4. My family is everything to me.

問4 Joel が手紙をいつまでも手元において置きたい心境を述べている文を1つ選び番号で答えなさい。

1. Joel wants to experience the same pain on the ocean again some day.
2. Joel wants to remember his hard days on the boat.
3. Joel wants to keep his love for his family in the memory.
4. Joel wants to catch big turtles.

志 望 科	受 験 番 号	氏 名
特 進 コ ー ス		
普 通 科		
商 業 科		

(志望科は○で囲みなさい)

共通問題解答欄

I

1	(1)		(2)		(3)		(4)	
	(5)		(6)		(7)		(8)	
2	(ア)	()()()						
3	(イ)							
4	(ウ)		5	(エ)				
6	(1)	教室や町のいたるところに や がある。						
	(2)	タイの国歌を国中に一日に 流す。朝の8時と の6時。						
	(3)	国歌が流れると、人々は し、 、国旗に 立ち、 大きな声で 歌う。						
7	①		②		③			
	④							
8	(1)							
	(2)							
	(3)							
	(4)							

評 定

小計 I

小計 II

小計 III

小計 IV

小計 V

II

(1)		(2)		(3)	
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III

(1)		(2)		(3)		(4)	
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IV

	3番目		5番目		3番目		5番目
(1)				(2)			
(3)				(4)			
(5)							

V

(1)	()	(2)	()	()	(3)	()	()
(4)	()	()	(5)	()	()		

VIは普通科・商業科志望者の解答欄です。

VI

問1

(1)		(2)		(3)		(4)	
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問2

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問3

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問4

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小計 VI

VIIは特進コース志望者の解答欄です。

VII

問1

(1)		(2)		(3)		(4)	
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問2

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問3

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問4

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小計 VII

平成22年度 数 学

■ 答えは解答用紙に記入しなさい。ただし、1～4は共通問題です。

5～8は選択問題です。普通科・商業科志望者は5・6を、特進コース志望者は7・8を解答しなさい。

1 次の式を計算しなさい。(共通問題)

$$(1) -7 - (-5) + 3 \quad (2) 201 \times 201 - 200 \times 202 \quad (3) (-x)^2 \times (-y^2) \div (xy)^2$$

$$(4) 15 \div \sqrt{3} + \sqrt{27} - 5\sqrt{3} \quad (5) \left(\frac{1}{4} + \frac{2}{7}\right) \times \left(\frac{2}{3} - \frac{1}{5}\right)$$

2 次の式を因数分解しなさい。(共通問題)

$$(1) 2xy^2 - 2xy - 4x \quad (2) x^2 - 2xy + y^2 - 16$$

3 次の方程式を解きなさい。(共通問題)

$$(1) \frac{3x+2}{5} = \frac{x-8}{2} - x \quad (2) \begin{cases} 3x = 4y \\ -0.2x + 0.4y = 0.3 \end{cases}$$

$$(3) x^2 - 3x + 4 = 8$$

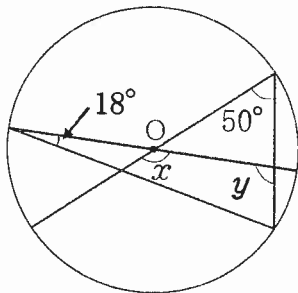
4 次の各問に答えなさい。(共通問題)

(1) 長方形ABCDがある。AB=3、BC=4とする。

- ① 対角線ACの長さを求めなさい。
- ② AB、BC上にそれぞれAP=BQとなる点P、Qをとる。AP=xとすると、△PQCの面積をxを使って表しなさい。
- ③ △PQCの面積が△PCDの面積の $\frac{1}{2}$ に等しくなるようにxの値を求めなさい。

(2) nを自然数とする。 $\frac{360}{n}$ が自然数となるようなnはいくつありますか。

(3) 下図は中心をOとする円である。∠x、∠yを求めなさい。



(4) 1から5までの数字を1つずつ書いた5枚のカードから2枚を選んで2けたの数字をつくるとき、偶数ができる確率を求めなさい。

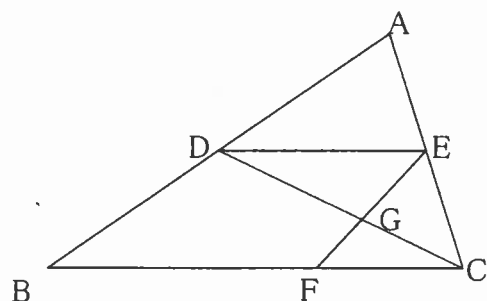
(5) $x + y = -1$ のとき、 $x^2 - 4x + y^2 - 4y + 2xy + 5$ の値を求めなさい。

(6) 3直線 $y = x - 3$ 、 $y = -\frac{1}{2}x + 3$ 、 $y = ax + 5$ によって、三角形ができないような定数 a の値のひとつは $-\frac{1}{2}$ である。他の2つを求めなさい。

※ 次の問題からは選択問題です。普通科・商業科志望者は5・6を、特進コース志望者は7・8を解答しなさい。

(普通科・商業科志望者は次の5・6を解答しなさい)

- 5 右図のような△ABCがある。点D、Eはそれぞれ辺AB、ACの中点であり、BF:FC=3:2、CD=18cmである。これについてあとの問いに答えなさい。

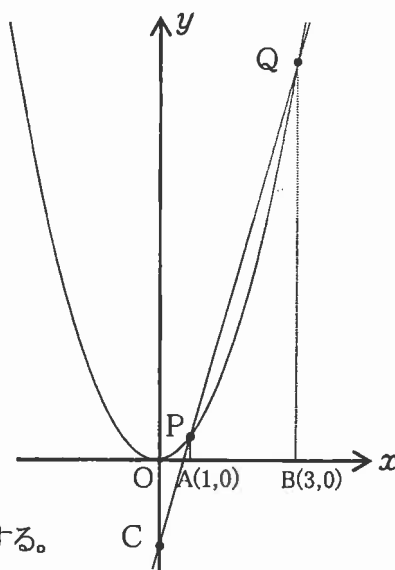


- (1) △ABCの面積は△ADEの面積の何倍か求めなさい。
- (2) 線分CGの長さを求めなさい。
- (3) △DEGの面積を S_1 、△CFGの面積を S_2 とするとき $S_1 : S_2$ を求めなさい。

- 6 2次関数 $y = x^2 \cdots \textcircled{1}$ において、点Pは $x = 1$ 、点Qは $x = 3$ のときの①上の点とする。

A(1, 0)、B(3, 0)のとき、次の問いに答えなさい。

- (1) x の値が1から3まで増加するとき、①の変化の割合を求めなさい。
- (2) 直線PQの方程式を求めなさい。
- (3) 直線PQと y 軸との交点をCとすると、△OACの面積を求めなさい。
- (4) 四角形ABQPを x 軸を軸として、1回転してできる回転体の体積を求めなさい。円周率は π とする。

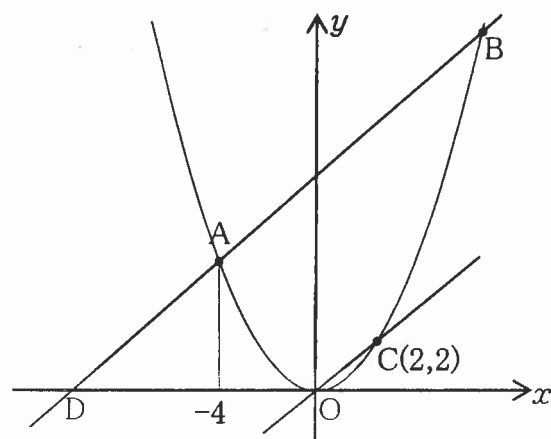


(特進コース志望者は次の7・8を解答しなさい)

- 7 正の整数 n に対して、 3^n を10で割ったときの余りを a_n とする。たとえば $a_1 = 3$ 、 $a_2 = 9$ 、 $a_3 = 7$ である。これについて後の問いに答えなさい。

- (1) a_5 の値を求めなさい。
- (2) a_n の値の中で一番小さい値を求めなさい。
- (3) a_{2010} の値を求めなさい。

- 8 図のように放物線 $y = ax^2$ ($a > 0$) のグラフ上に3点 A、B、C がある。点Aの x 座標を-4、点Cの座標は(2, 2)とする。また、直線ABと直線OCは平行である。また、直線ABと x 軸との交点をDとする。このとき、次の問いに答えなさい。



- (1) 直線ABの方程式を求めなさい。
- (2) 点B、点Dの座標を求めなさい。
- (3) △ABCの面積を求めなさい。
- (4) △AOBを x 軸を軸として回転した回転体の体積を求めなさい。ただし、円周率は π とする。

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特 進 コ ー ス 普 通 科 商 業 科		

(志望科は○で囲みなさい)

共通問題解答欄

1	(1)		
	(2)		
	(3)		
	(4)		
	(5)		
2	(1)		
	(2)		
3	(1)		
	(2)	$x = \quad, y = \quad$	
	(3)		
4	(1)	①	
		②	
		③	
	(2)		
	(3)	$\angle x = \quad, \angle y = \quad$	
	(4)		
	(5)		
	(6)		

評 定

小計 1

小計 2

小計 3

小計 4

5・6は普通科・商業科志望者の解答欄です

5	(1)	
	(2)	
	(3)	$S_1 : S_2 =$
6	(1)	
	(2)	
	(3)	
	(4)	

7・8は特進コース志望者の解答欄です

7	(1)	
	(2)	
	(3)	
8	(1)	
	(2)	$B(\quad, \quad), D(\quad, \quad)$
	(3)	
	(4)	

小計 5(7)

小計 6(8)