

Date: _____

Instructor: ERIC WOLGEMUTH

Student Name/ID#: _____

Total Score:

/ 30

GIG HARBOR HIGH SCHOOL - AEROSPACE TECH 1: PERIOD 02 - 1ST SEMESTER

Navigation Test

INSTRUCTIONS: Please read each question *carefully*.

This is a timed test. You have 70 minutes total and the test will end automatically (unless I have a note from your counselor allow for extra time on tests)

QUESTION 1 /1

Imagine you are Sopwith Camel pilot in World War I. You have to navigate your plane to a mission 250 miles away. Which of the following is most accurate:

 1

Choose one option for each blank section

1 You will probably need to use your radio quite often

1 Your squadron commander will give you radar directions

1 You will have to navigate by sight (dead reckoning)

1 You will use detailed aviation charts

QUESTION 2

 /1

Imagine you are Sopwith Camel pilot in World War I. You have to navigate your plane to a mission 250 miles away. Which of the following is **FALSE**: 1



Choose one option for each blank section

1 You can make the trip non-stop

1 You won't be able to fly in bad weather

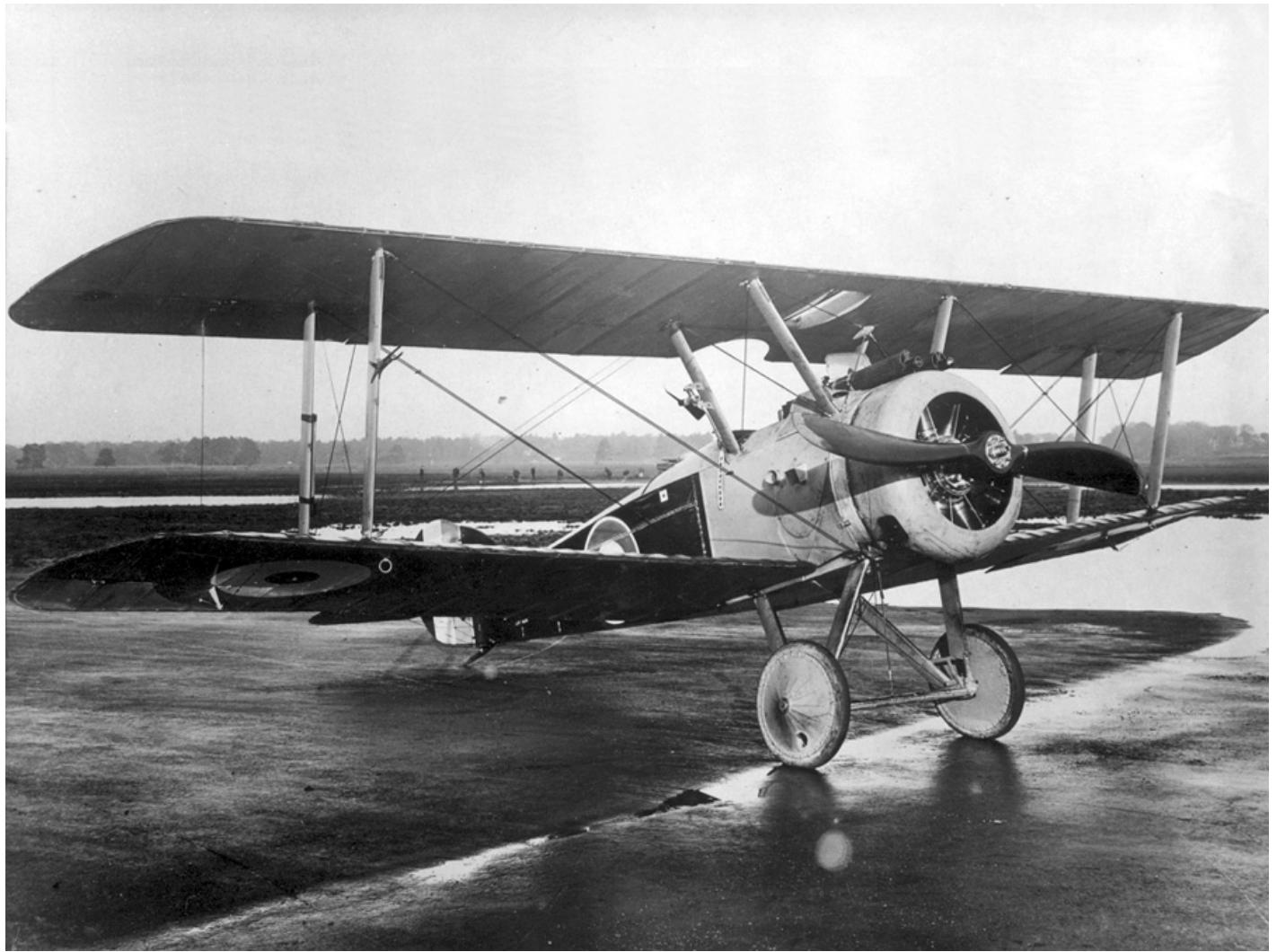
1 You won't be able to fly at night

1 You won't be able to use an ESB Flight Calculator

QUESTION 3

/1

Imagine you are flying with a group of 12 other Sopwith Camel fighter planes in World War I. Your group is flying to a target 20 minutes away and the weather is windy and cloudy; but you can still fly.



What is the best way to keep your group together?

1	
---	--

Choose one option for each blank section

- | | |
|---|--|
| 1 | Using your radio to communicate with the group |
|---|--|
- | | |
|---|---|
| 1 | Using your flight calculator to track your position |
|---|---|
- | | |
|---|---|
| 1 | Using your sextant to track your position |
|---|---|
- | | |
|---|---|
| 1 | maintaining visual contact with the group |
|---|---|

QUESTION 4 /1

Imagine you are the navigator on a B-17 in WWII. You just received your instructions for tomorrow's bombing raid.



Which of the following is NOT an activity that you will do to prepare

1 Plan your route to the target using charts

2

Check the weather forecast for the entire trip

3

Use your ESB Calculator to plot how far the plane will drift

4

Check the radar unit on the B-17 to make sure it is working correctly

/1**QUESTION 5**

Imagine you are the navigator on a B-17 in WWII:



You're on your way to a target in Germany and your windspeed instrument shows a very strong wind pushing you off course. Your best response is to:

1 Tell the pilot to return to your home base

2

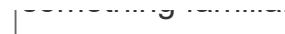
Tell the crew to look out the window for landmarks

3

Use your ESB Calculator to plot your bomber's drift

4

Tell the pilot to continue on until you see something familiar

**QUESTION 6** /1

Imagine you are the navigator on a B-17 in WWII:



You're on your way to a target in Germany on a clear and cold night and you want to practice your night time navigation skills. Which type of navigation can you practice only on a flight like this? :

1

Use a very precise clock to help find your position

2

Use a sextant to help find your position by using certain stars

Use your ESB Calculator to plot your bomber's drift

4

Access the cockpit radar system to find your position

QUESTION 7

/1

Imagine you have just taken your first flight as an aircraft pilot on your way to earning you very first pilot certification. Which of the following is true:

1

Choose one option for each blank section

1

You can fly anywhere within 100 miles of the airport

1

You can fly anywhere within 100 miles during daylight hours only

1

You can fly anywhere that has radar coverage by the airport tower

1

You can only fly in good weather

QUESTION 8

/1

Imagine you have earned your first flight certification. You are now taking your IFR flight test. Why **MUST** you wear a hood like this:



1

Choose one option for each blank section

- 1 So you can't look at the window
- 1 So you can only see your instruments
- 1 So you can still use your radio/headphones
- 1 all of these

QUESTION 9

Which of the following certifications is available to you within the fewest number of years following your high school graduation

1	
---	--

Choose one option for each blank section

1	Commercial Airline Pilot
1	Military Fighter Pilot
1	Flight Instructor
1	Commuter Airline Pilot

QUESTION 10

/4

Order the following types of Pilot license in terms of the least to most hours of flight time required

Commercial Pilot

Visual Flight Rules

Multi Engine

Instrument Flight Rules

QUESTION 11

/1

What does VFR stand for?

1

Choose one option for each blank section

1 Visual Flight Restrictions

1 Virtual Flight Rules

1 Visual Flight Rules

1 Virtual Flight Restrictions

QUESTION 12

/1

A radial is used during VOR navigation. Which of the following is the best description

of a radial in VOR navigation?

1

Choose one option for each blank section

1 The shortest distance between two points

1 A direct radio line broadcast at a certain angle from a certain place

1 A mathematical representation of your plane's actual location

1 A variable radar screen showing time and position on your cockpit screen

QUESTION 13

/1

What does IFR stand for?

1	
---	--

Choose one option for each blank section

1	Instrument Flight Restrictions
---	--------------------------------

1	Instrument Flight Rules
---	-------------------------

1	Instrument Flight Rules
---	-------------------------

1	Instrument Flight Restrictions
---	--------------------------------

QUESTION 14

--

 /3

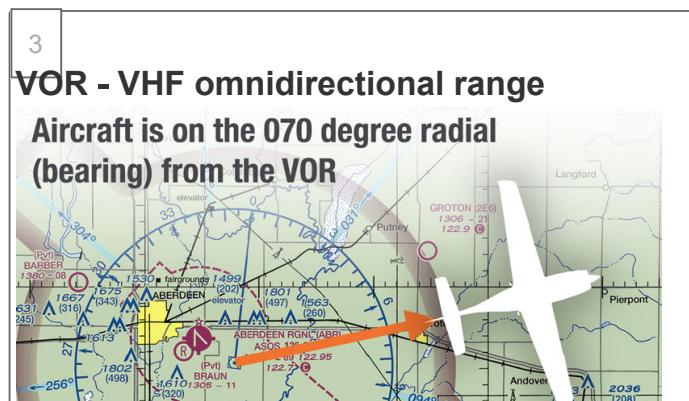
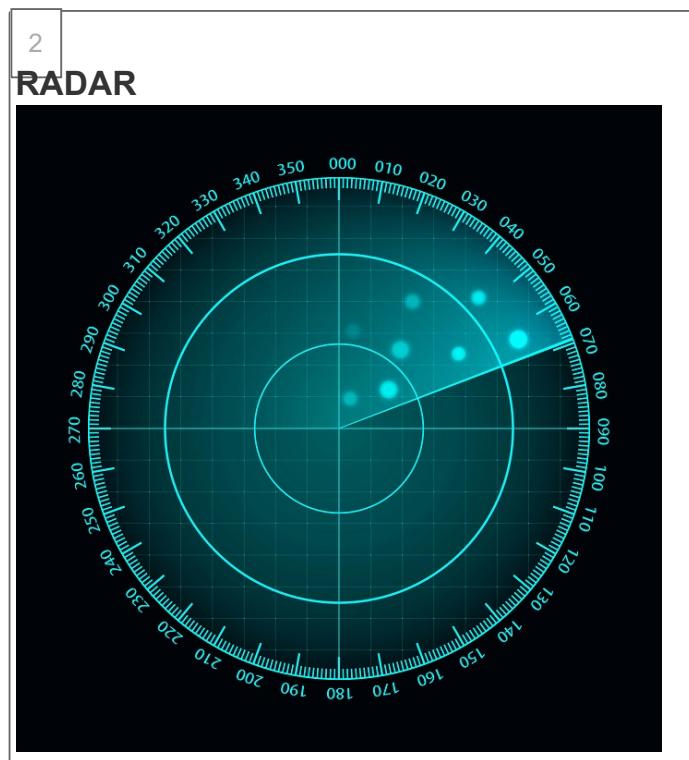
Imagine you are a pilot flying south from Tacoma to Portland. Why **MUST** you do anything and everything an air traffic controller tells you to do?

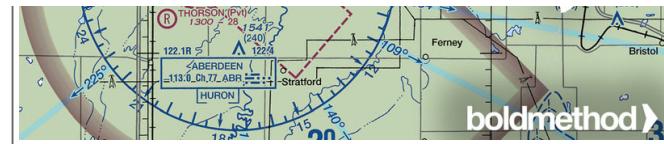
QUESTION 15

--

 /1

All of the following are navigation aids that modern pilots use EXCEPT:





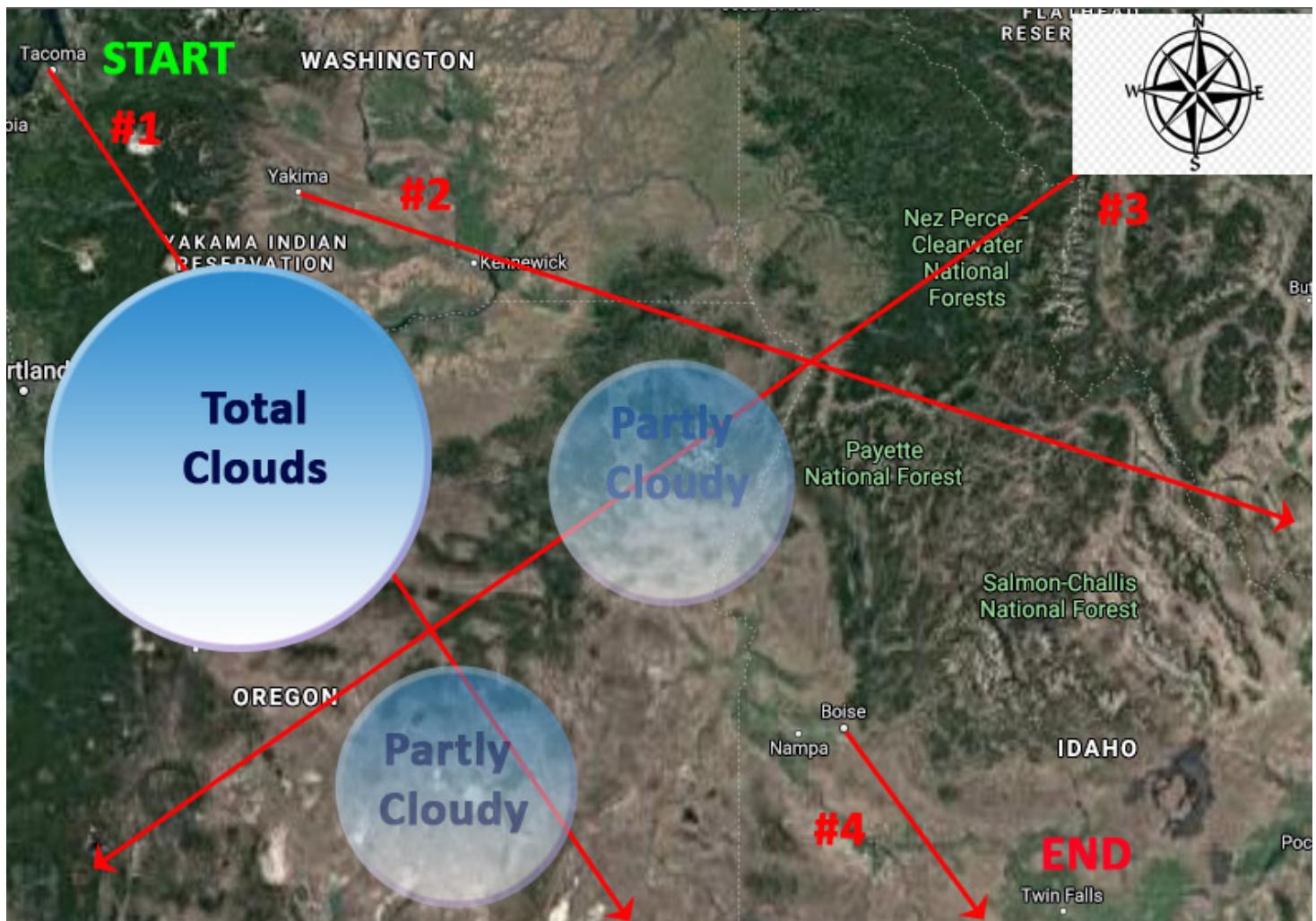
4

Dividers and Compass

**QUESTION 16** /5

Imagine you are planning a flight from Tacoma (START) to Idaho Falls (END) in Oregon.

- 1) Provide a basic flight plan from Tacoma to Idaho Falls by making a list of the steps you plan to take.
- 2) Begin by saying whether you'll be flying using VFR or IFR
- 3) You MUST include reference to at least 2 radials



ANSWER KEY

POSSIBLE POINTS: 25 FACTOR: X1 TEST VALUE: 30

Navigation Test

GRADING INSTRUCTIONS: Grade each question and tally the points to find the student's total points for the assessment. If the factor does not equal 1, multiply the total points by the factor to obtain the student's final score.

QUESTION 1: FILL IN THE BLANK DROPODOWN

Imagine you are Sopwith Camel pilot in World War I. You have to navigate your plane to a mission 250 miles away. Which of the following is most accurate: 1



Correct answers:

1 You will have to navigate by sight (dead reckoning)

1 possible pt.

QUESTION 2: FILL IN THE BLANK DROPODOWN

Imagine you are Sopwith Camel pilot in World War I. You have to navigate your plane to a mission 250 miles away. Which of the following is **FALSE**:

1	
---	--



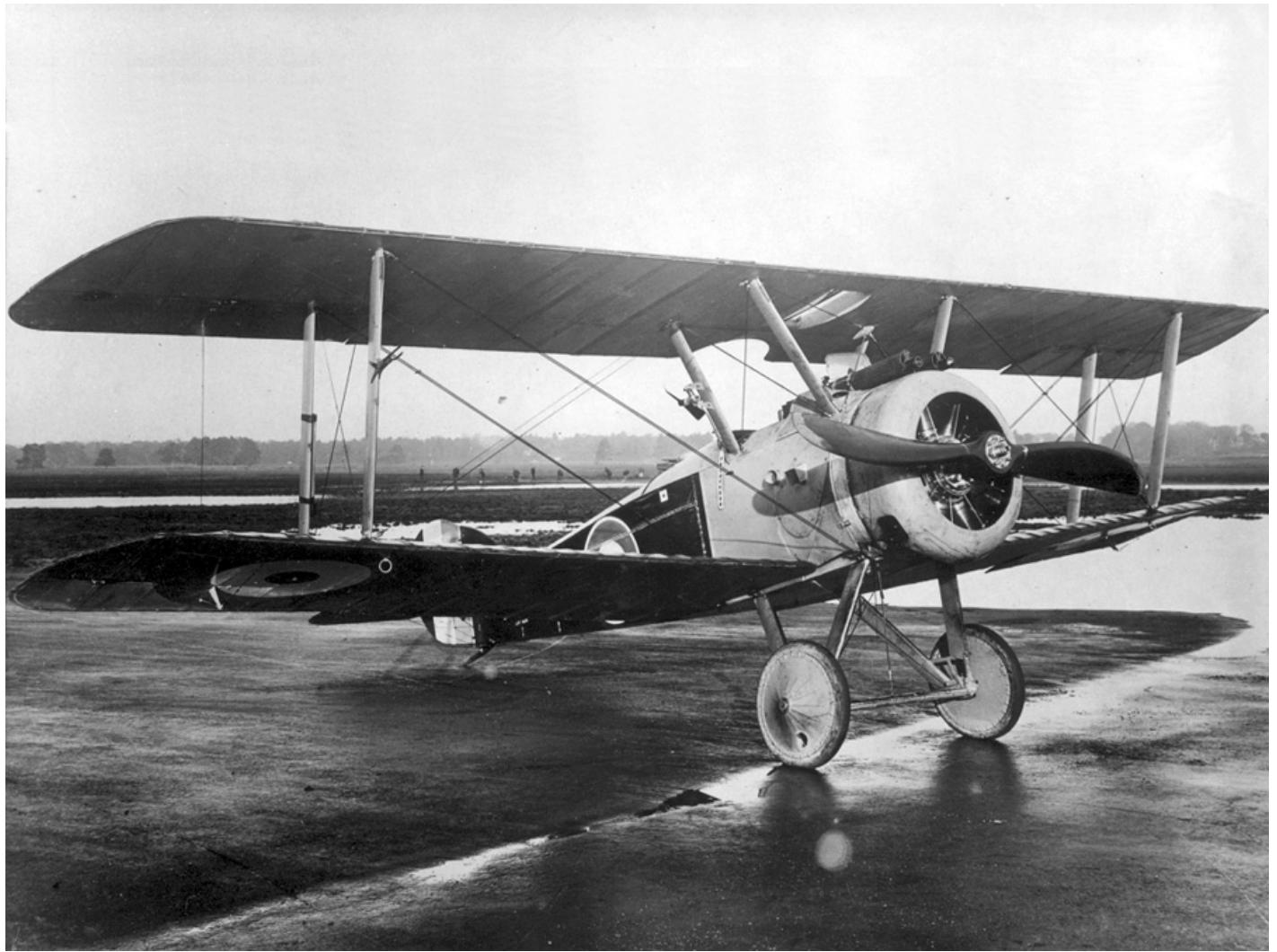
Correct answers:

1	You can make the trip non-stop
---	--------------------------------

1 possible pt.

QUESTION 3: FILL IN THE BLANK DROPODOWN

Imagine you are flying with a group of 12 other Sopwith Camel fighter planes in World War I. Your group is flying to a target 20 minutes away and the weather is windy and cloudy; but you can still fly.



What is the best way to keep your group together?

1	
---	--

Correct answers:

1	maintaining visual contact with the group
---	---

1 possible pt.

QUESTION 4: FILL IN THE BLANK DRAG AND DROP

Imagine you are the navigator on a B-17 in WWII. You just received your instructions for tomorrow's bombing raid.



Which of the following is NOT an activity that you will do to prepare

1

Correct answers:

- 1 Check the radar unit on the B-17 to make sure it is working correctly

1 possible pt.

QUESTION 5: FILL IN THE BLANK DRAG AND DROP

Imagine you are the navigator on a B-17 in WWII:



You're on your way to a target in Germany and your windspeed instrument shows a very strong wind pushing you off course. Your best response is to:

Correct answers:

1 Use your ESB Calculator to plot your bomber's drift

1 possible pt.

QUESTION 6: FILL IN THE BLANK DRAG AND DROP

Imagine you are the navigator on a B-17 in WWII:



You're on your way to a target in Germany on a clear and cold night and you want to practice your night time navigation skills. Which type of navigation can you practice only on a flight like this? : 1 : 2 :

Correct answers:

1 Use a sextant to help find your position by using certain stars

1 possible pt.

QUESTION 7: FILL IN THE BLANK DROPODOWN

Imagine you have just taken your first flight as an aircraft pilot on your way to earning you very first pilot certification. Which of the following is true:

1	
---	--

Correct answers:

1	You can only fly in good weather
---	----------------------------------

1 possible pt.

QUESTION 8: FILL IN THE BLANK DROPODOWN

Imagine you have earned your first flight certification. You are now taking your IFR flight test. Why MUST you wear a hood like this:



1	
---	--

Correct answers:

1	all of these
---	--------------

1 possible pt.

QUESTION 9: FILL IN THE BLANK DROPODOWN

Which of the following certifications is available to you within the fewest number of years following your high school graduation

1	
---	--

Correct answers:

1 Flight Instructor

1 possible pt.

QUESTION 10: ORDERING

Order the following types of Pilot license in terms of the least to most hours of flight time required

Commercial Pilot

Visual Flight Rules

Multi Engine

Instrument Flight Rules

4 possible pts. / partial credit

QUESTION 11: FILL IN THE BLANK DROPODOWN

What does VFR stand for?

1	
---	--

Correct answers:

1	Visual Flight Rules
---	---------------------

1 possible pt.

QUESTION 12: FILL IN THE BLANK DROPODOWN

A radial is used during VOR navigation. Which of the following is the best description of a radial in VOR navigation?

1	
---	--

Correct answers:

1	A direct radio line broadcast at a certain angle from a certain place
---	---

1 possible pt.

QUESTION 13: FILL IN THE BLANK DROPODOWN

What does IFR stand for?

1

Correct answers:

1 Instrument Flight Rules

1 possible pt.

QUESTION 14: SHORT ANSWER/ESSAY

Imagine you are a pilot flying south from Tacoma to Portland. Why **MUST** you do anything and everything an air traffic controller tells you to do?

QUESTION 15: FILL IN THE BLANK DRAG AND DROP

All of the following are navigation aids that modern pilots use EXCEPT: 1

Correct answers:

1

Dividers and Compass



1 possible pt.

QUESTION 16: SHORT ANSWER/ESSAY

Imagine you are planning a flight from Tacoma (**START**) to Idaho Falls (**END**) in Oregon.

- 1) Provide a basic flight plan from Tacoma to Idaho Falls by making a list of the steps you plan to take.
- 2) Begin by saying whether you'll be flying using VFR or IFR
- 3) You **MUST** include reference to at least 2 radials

