Australian Air League

WORKBOOK
QUIZZES

August 2021

WORKBOOK QUIZZES

Name _____ Rank _____

Age ____ Membership # _____ Squadron _____

Wing _____ Group _____

Address _____

This Workbook contains all Workbook Quizzes for the Australian Air League Education syllabus for those working from the Online Education Workbooks.

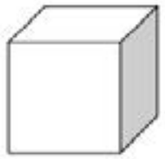
Table of Contents

Air Navigation Class 4

Review Questions

Edition AN4/January 2006

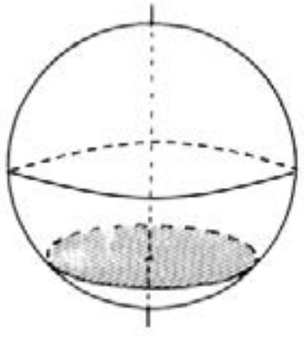
Which of the following is the correct shape of the Earth? Circle the one that you think is the correct shape.



What are the names of the imaginary lines that are used to identify positions on the surface of the earth? Put a cross in the box next to the answer you think is correct.

	Equator and Poles
	Longitude and Latitude
	Lateral and Longerbit

On the globe below is indicated a Great Circle and a Small Circle. Label the circles with the correct name:



Circle?: _____

Circle?: _____

What place does the Prime Meridian pass through? Put a cross in the box next to the answer you think is correct.

	Australia
	Greenwich
	Canberra

Review Marks _____ / 20

The path that the aircraft follows over the ground is called what? Put a cross in the box next to the answer you think is correct.

	Track
	Heading
	Drift

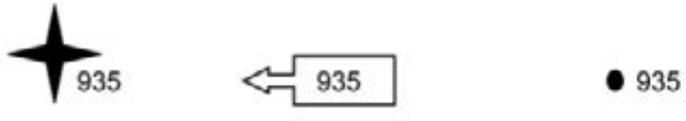
Which one of these symbols represents a railway line on a chart? Circle the one that you think is the correct symbol.

Which one of these symbols represents an airfield on a chart? Circle the one that you think is the correct symbol.

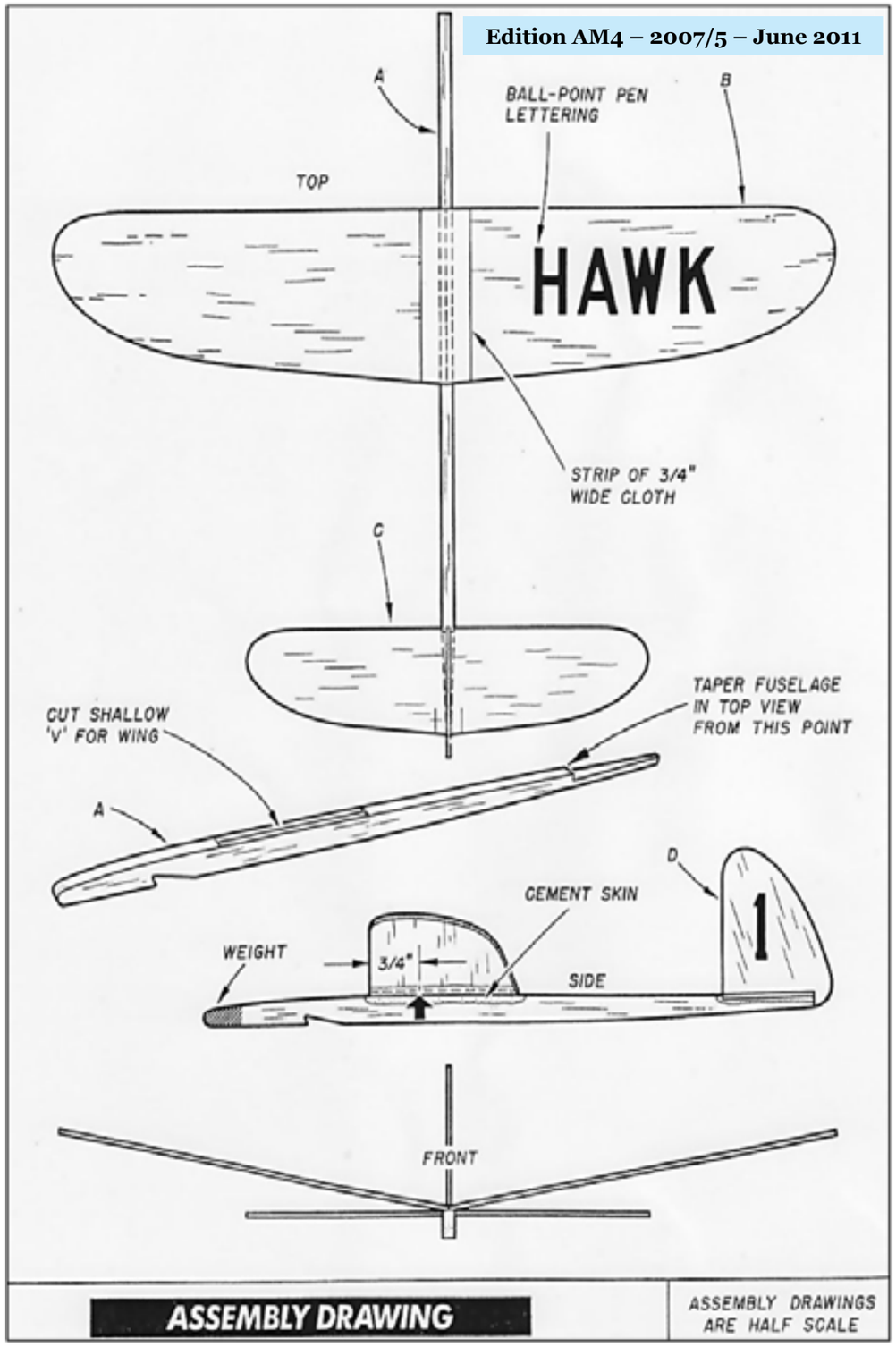
What is the name of the symbol that indicates the highest point in an area? Put a cross in the box next to the answer you think is correct.

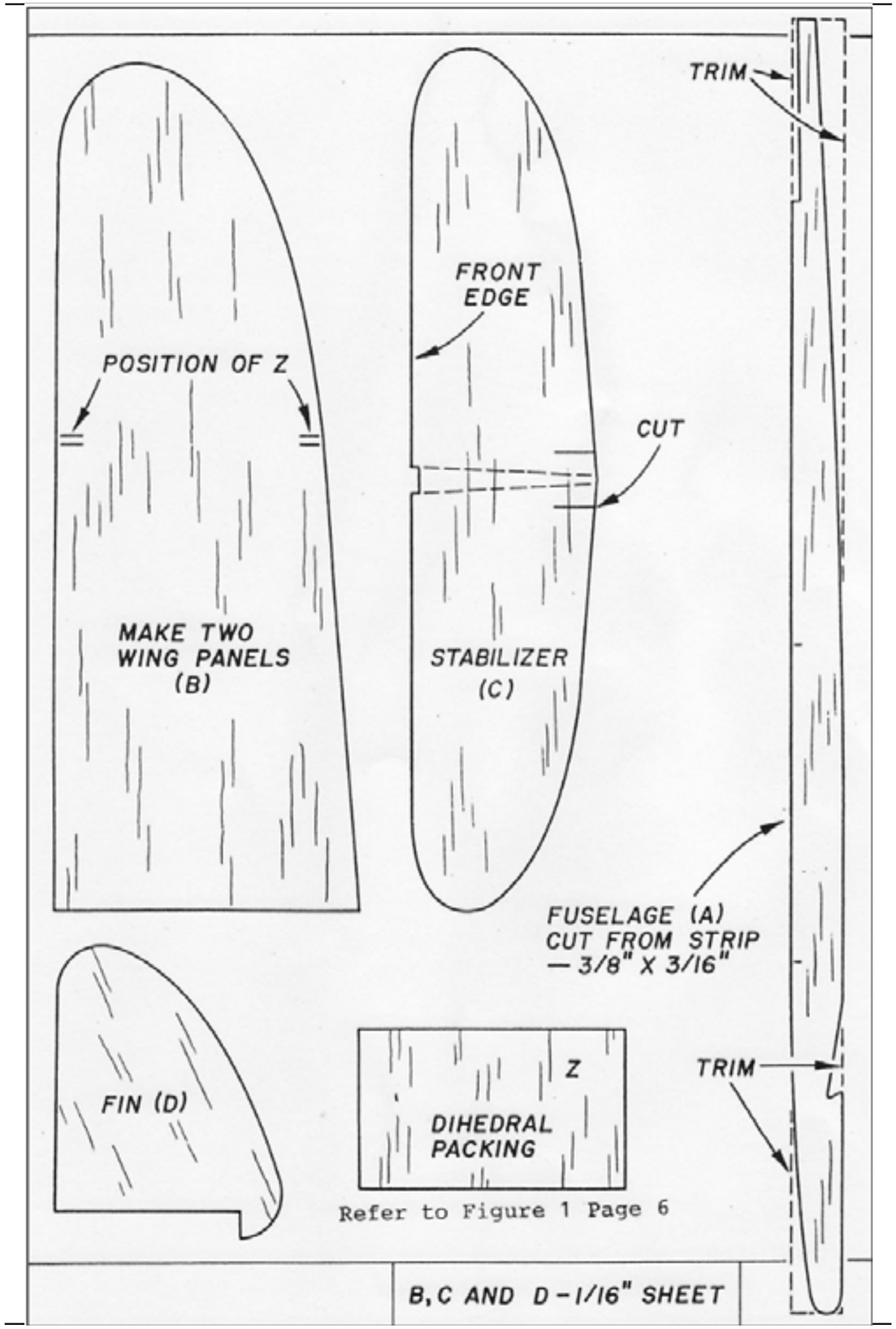
	Spot Height
	Maximum Height
	High Spot

Which of the following is the correct way to show the highest point in an area? Circle the one that you think is the correct answer.



Aircraft Modelling Class 4





Aircraft Recognition Class 4

Edition AIRREC4 – 01 January 2012

Workbook Project

There is two parts to this Project.

Part A: Collect ten (10) pictures of different types of aircraft from old magazines or from the internet. Paste in the workbook beside the 'WEFTUS' cards and write the type of aircraft in the 'Aircraft?' box provided, (Just the brand and type will be sufficient). *(1 mark will be awarded for the picture and writing the aircraft type in the space provided).*

Part B: For each picture write at least one WEFTUS feature in each of the categories in the space provided. *(½ Mark will be awarded for each correct answer in Part B). Your Squadron OC or Education Officer will use their discretion in marking your answers, especially with the 'S' section. (Total: 4 Marks each card).*

An example is shown below.

Aircraft?	*DeHavilland Dash 8*	*1 Marks*
W	*High Wing*	*1/2 Mark*
E	*Two*	*1/2 Mark*
F	*Medium*	*1/2 Mark*
T	*T-Tail*	*1/2 Mark*
U	*Rectractable tricycle*	*1/2 Mark*
S	*Bump on fuselage under tail*	*1/2 Mark*

Now you complete the next ten 'WEFTUS' cards.

Paste Picture Here

1.

Aircraft?		*Markers Use Only*
W		
E		
F		
T		
U		
S		

Total Workbook Project Marks _____ / 40

Paste Picture Here

2.

Aircraft?		*Markers Use Only*
W		
E		
F		
T		
U		
S		

Paste Picture Here

3.

Aircraft?		*Markers Use Only*
W		
E		
F		
T		
U		
S		

Paste Picture Here

4.

Aircraft?		*Markers Use Only*
W		
E		
F		
T		
U		
S		

Paste Picture Here

5.

Aircraft?		Markers Use Only
W		
E		
F		
T		
U		
S		

Paste Picture Here

6.

Aircraft?		Markers Use Only
W		
E		
F		
T		
U		
S		

Paste Picture Here

7.

Aircraft?		Markers Use Only
W		
E		
F		
T		
U		
S		

Paste Picture Here

8.

Aircraft?		Markers Use Only
W		
E		
F		
T		
U		
S		

Paste Picture Here

9.

Aircraft?		Markers Use Only
W		
E		
F		
T		
U		
S		

Paste Picture Here

10.

Aircraft?		Markers Use Only
W		
E		
F		
T		
U		
S		

Aircraft Recognition Class 3

Review Questions

Edition AIRREC3/02/2009

1. Name one difference between the Piper Tomahawk and the Beechcraft Skipper.

_____

2. Usually the only way to tell the difference between a Cessna 152 and a 152 Aerobat is:

_____

3. A Piper aircraft which has four seats, single engine and a fixed undercarriage is a:

_____

4. What is the main difference between a Cessna 172 and a Piper Warrior?

_____

5. Some Beechcraft Bonanza's have an unusual tail arrangement. What is it called? (Either name).

_____

6. Name one single engine aeroplane that is not as common as a Piper, Cessna or Beechcraft.

_____

7. One of the aeroplanes in the above category has a vertical stabiliser that looks as though it has been attached the wrong way around. Which aeroplane is it?

_____

8. What is the name of the Aerobatic aeroplane that is a Biplane?

_____

9. What is the name of the Glider Towing aircraft which is also used as a Crop Duster?

_____

10. What is the Registration Prefix of Germany?

_____

Total Workbook Quiz Marks _____ / 10

Aircraft Recognition Class 2

Review Questions

Edition AIRREC2 / June 2012

1. What is the name of the Commuter Aircraft pictured?

- Beech 1900D ☐
- Embraer EMB110 Bandierante ☐
- Fairchild Metro III ☐
- Handley Page Jetstream 31 ☐

2. The SAAB 340A is manufactured in which country?

- USA ☐
- United Kingdom ☐
- Brazil ☐
- Sweden ☐

3. What was the name of the aircraft that was given the nickname 'Concordski'?

- Tupolev Tu-144 ☐
- Tupolev Tu-204 ☐
- Antonov An-124 Ruslan ☐
- Ilyushin Il-96 ☐

4. The McDonnell Douglas/Boeing MD-11 has how many engines?

- Two ☐
- Three ☐
- Four ☐
- Six ☐

5. The Boeing 747-8 Series has a feature different to the 747-400 Series. What is it?

It has Raked Wingtips	
It has no Winglets	
It has longer Winglets	
It has Wingtip Fences	

For the following four answers, write your answer in the space provided

6. Fairchild aircraft are manufactured in which country?

_____

7. What is the feature of the Airbus A380 which makes it like no other aircraft?

_____

8. Name two (2) overseas airlines that fly to Australia;

_____

_____

9. Name one Australian Freight carrier;

_____

Questions 10-15:

For the six (6) pictures depicted on the following page, place the correct 'Letter' corresponding to the Aircraft or Tail Marking in the space provided.

10	V Australia	
11	Boeing 777	
12	ATR-72	
13	Airbus A330	
14	Commuter Aircraft	
15	Emirates Airlines	


A


B


C


D


E


F

Part of your assessment is to fill in the blank boxes of the Airlines Tail Markings. You can either draw and colour these markings or collect suitable pictures from any source and paste in the appropriate box.
Two (2) marks per correct tail marking will be awarded. Total 10 Marks.

Tiger Airways Australia

Air Pacific - Fiji

Malaysia Airlines

Air China

United Parcel Service - USA

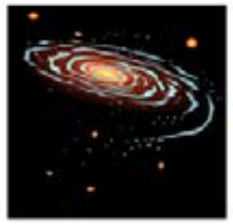
Total Workbook Quiz Marks _____ / 15
Practical Work - Tail Markigns _____ /10

Astronomy Class 4

Review Questions

Edition AST4/01/November 2010

Below is a crossword made up of interesting information you learned in Section 3. Try and fill in the rows and columns without having a look at the section; it is pretty easy.



ACROSS

3 A visitor to the Solar System
5 Our Solar System is part of one
7 Star light, star the brightest
8 Starry images in the night sky
9 A shooting star

DOWN

1 The Hunter
2 Also known as "*The Southern Cross*".
4 The imaginary travel line of the Sun
6 Red giant in the Scorpion

Please complete this questionnaire prior to attempting the Astronomy Class 4 badge examination.
This questionnaire is worth a maximum of 20 points towards your final result.
Place a cross in the box next to the correct answer.

Q.1: In our Solar system there are 8 classical planets and..... Dwarf Planets?

☐ 5 ☐ 6 ☐ 4 ☐ 3

Q.2: The Planet pictured is the largest planet in the solar system. It is;

☐ Saturn ☐ Pluto ☐ Jupiter ☐ Mars

Q.3: The famous constellation pictured is only seen in the Southern Hemisphere. It is;

☐ Orion ☐ Scorpio ☐ Taurus ☐ The Southern Cross

Q.4: This Telescope is orbiting the Earth but observing the Universe. It is called the;

☐ Hubble Space Telescope ☐ Parkes Radio Telescope
☐ Mount Palomar ☐ The Jansky Antenna

Q.5: Halley's Comet is named after the famous English Astronomer;

☐ Sir Isaac Newton ☐ Galileo ☐ Einstein ☐ Sir Edmund Halley

Q.6: Which planet was a Classical Planet but is now a Dwarf Planet?

☐ Saturn ☐ Pluto ☐ Makemake ☐ Uranus

Review Marks _____ / 20

Q.7: Our Solar System is in the .....Galaxy;

☐ Crab ☐ Milky Way ☐ Andromeda ☐ Gemini

Q.8: Leo is a sign of the Zodiac. How many Zodiac signs are there?

☐ 10 ☐ 13 ☐ 12 ☐ 15

Q.9: If a Shooting Star burns up in the atmosphere, it is a;

☐ Comet ☐ Meteor ☐ Meteorite ☐ None of the Above

Q.10: What is the closest planet to the Sun?

☐ Venus ☐ Earth ☐ Mercury ☐ Mars

Astronomy 3

Review Questions

Edition AST3/2010

Now that you know about telescopes, for the practical work for this badge you are to build a model of a telescope. **This project is worth a maximum of 10 points**.

You may choose to build a refracting or reflecting telescope, ground or space based.

IMPORTANT

Your model telescope does not have to work, but must show your instructor that you understand the principle involved, and how it works.

The model can be made of any material, or combination of materials. Highest results will be gained where a student has shown innovation, ingenuity and good workmanship.

Description of project

You are also required to describe how you built your model and why it should work. Include schematic diagram of calculations where applicable.

IMPORTANT NOTE

Please complete this questionnaire prior to attempting the Astronomy Class 3 badge examination.

This questionnaire is worth a maximum of 10 points towards your final result.

Place a cross next to the correct answer.

Q.1: The Greek astronomer who tried to determine how large the Earth was after observing the Suns image at the bottom of a well in Syene was?

☐ Thales of Miletus ☐ Hipparchus ☐ Eratosthenes

Q.2: The astronomer who first applied *heliocentric* motion to the planets was?

☐ Claudius Ptolemy ☐ Nicholas Copernicus ☐ Tycho Brahe

Q.3: *The radius vector connecting the Sun to a planet sweeps out equal areas in equal times.* This is which of Kepler's laws of planetary motion?

☐ First ☐ Second ☐ Third

Q.4: The astronomer who discovered the planet Uranus was?

☐ Sir Isaac NEWTON ☐ Johann SCHRÖTER ☐ Sir William HERSCHEL

Q.5: Mercury and Venus are said to be?

☐ The inferior planets ☐ The superior planets ☐ The outer planets

Q.6: The day in March when the Sun crosses the equator is called the?

☐ Summer solstice ☐ Vernal equinox ☐ Autumnal equinox

Q.7: This planet orbits a Dwarf.

☐ Titan ☐ Io ☐ Charon

Q.8: Which planet from the Sun was named after the Roman god of the sea?

☐ Third ☐ Fifth ☐ Eighth

Q.9: The most common type of reflecting telescope is the?

☐ Cassegrain ☐ Schmidt ☐ Newtonian

Q.10: The normal telescope mount found in observatories is the?

☐ Altazimuth ☐ Polar ☐ Equatorial

Workbook Questionnaire ____/10
Practical Work ____/10

Drone Air Activities 3

Review Questions

April 2021

Research Topic

How many drones are currently in use in Australia?

_____

_____

_____

Review - History of Drones

1. In what year was the first use of Unmanned Aerial Vehicles recorded?
   a. 1916
   b. 1821
   c. 1806
   d. 1849

2. What did the early development of drones focus on?
   a. Measuring air temperature
   b. Transporting small animals
   c. Military applications
   d. Delivering the mail

3. During World War 1, drone experiments used newly developed R_____ C_____ technology to control pilotless aircraft.

4. What was the name of the first mass-produced drone in the United States?
   a. DJI Phantom
   b. OQ-2 Radioplane
   c. Hewitt-Sperry Automatic Airplane
   d. de Havilland DH.82B Queen Bee

5. Commercial drones were first used during the 1980's in the country of _____ to help spray pesticides on rice fields.

Review Marks _____ / 5

Review - What is a Drone?

1. What is a Drone?

2. List two advantages of a multirotor drone?

3. What are two advantages of a fixed wing drone?

4. What is the advantages of a tilt-wing drone?

Review Marks _____ / 4

Review - Use of Drones

1. List four companies, businesses, not-for-profits or government agencies that use drones and summarise how they use drones:

2. Choose one of the above organisations, and find a picture of a drone used by that organisation and insert it in the box below. Specifically describe the physical aspects of the drone and explain how it is used.

INSERT PICTURE OF DRONE

Review Marks _____ / 2

Review - Main Parts of a Drone

Label the components on the drone diagram below.

Review Marks _____ / 2

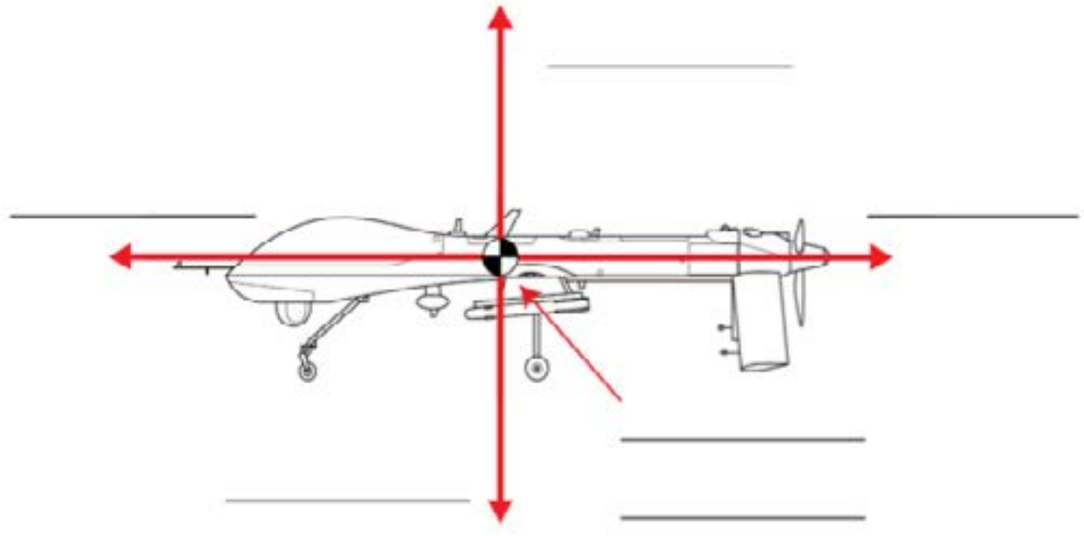
Review - Drones Regulations

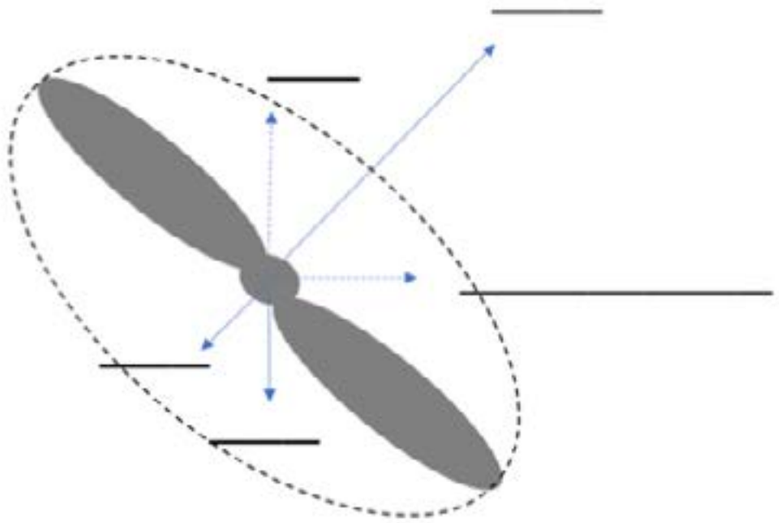
1. You must operate your drone within visual line of sight? True / False (circle the correct answer)
2. You must not fly your drone higher than?
   a. 100 metres
   b. 50 metres
   c. 400 metres
   d. 120 metres
3. You must only fly _____ drone(s) at a time
4. You should never fly your drone over or in an area affecting public safety or where _____ _____ are underway

Review Marks _____ / 4

Review - Theory of Drone Flight

Fill in the blanks on the diagrams below





Review Marks _____ / 2

General Knowledge 3

Marking Sheets

Edition GK3,2,1/01

NAME: _____

CERT. No. _____

SQUADRON: _____

WING: _____

GROUP: : _____

NOTE
This Page is to be photocopied, completed and sent with the FORM 28.

SECTION	PART	DATE	MARKS	SIGNATURE
1. Aviation				
2. Welfare				
3. Observation				
4. Handwork				
5. Safety				
6. Outdoors				
7. Drill				

General Knowledge 2

Marking Sheets

Edition GK3,2,1/01

NAME: _____

CERT. No. _____

SQUADRON: _____

WING: _____

GROUP: _____

NOTE
This Page is to be photocopied, completed and sent with the FORM 28.

SECTION	PART	DATE	MARKS	SIGNATURE
1. Aviation				
2. Welfare				
3. Observation				
4. Craft				
5. Safety				
6. Outdoors				
7. Drill				

General Knowledge 1

Marking Sheets

Edition GK3,2,1/01

NAME: _____

CERT. No. _____

SQUADRON: _____

WING: _____

GROUP: _____

SECTION	PART	DATE	MARKS	SIGNATURE
1. Aviation / Air League				
2. First Aid / Emg. Services				
3. Flags / Honours				
4. Homecraft				
5. Safety				
6. Outdoors				
7. Leadership				

General Proficiency 3

Review Questions

Edition 2011

Review—Australian Military Aircraft

F/A-18 Hornet

General Dynamic F-111

KC-30A Tanker

Bombardier
Challenger CL-604

BAE Hawk 127

Pilatus PC-9/A

Bell 206B-1 Kiowa

Eurocopter Tiger ARH

S-70A-9 Black Hawk

CH-47 Chinook

MRH-90

Can you help our Air Traffic Controller identify all these planes?

Cut them out from page 49 and 51 and paste in the right spots!

F/A-18F SuperHornet

Boeing 737 AEW&C

Lockheed AP-3C Orion

C-17 Globemaster

C-130 Hercules

King Air 350

Boeing BBJ

S-70B-2 Seahawk

Eurocopter AS 350BA
Squirrel

Agusta A109E

Westland Sea King

(____ / 22)

(____ / 20)




RAAF / Australia	RNZAF / New Zealand	RSAF / Singapore	RMAF / Malaysia
RAF / United Kingdom	USAF / United States of America	JSDF / Japan	Luftwaffe / Germany
Russian Air Force	Indonesian Air Force	People's Liberation Army Air Force China	Indian Air Force

(_____ / 11)

Review

Can you help us?!!

Our apprentice aircraft engineer has been doing a 100 hour check on our aircraft and has forgotten where all the instruments go!

Cut them out on page 53 and paste them in the right spot

compass

airspeed indicator

attitude indicator

altimeter

turn and bank indicator

direction indicator

vertical speed indicator

fuel quantity

oil temperature

tachometer

(_____ / 10)

Review—Theory of Flight

1. The four forces that act on an aircraft in flight are L_____, W_____, T_____ and D_____ (4 points)

2. Lift is generate by a wing through a point called the _____ of _____ .

3. A head wind will increase an aircraft's Ground Speed (True / False).

4. The pitot tube is used to measure;
   (a) Indicated Air Speed
   (b) Outside Air Temperature
   (c) True Air Speed
   (d) Ground Speed

5. Bernoulli's Principle states that an increase in speed of a moving fluid such as air cause an increase / decrease in pressure.

6. The deflection of the airflow by a wing is called ;
   (a) Turbulence
   (b) Lift
   (c) Downwash
   (d) Drag

7. True Air Speed is calculated by allowing for differences in air _____ and _____ (2 points)

8. Newton's Third Law states;
   (a) Temperature decreases with an increase in altitude
   (b) Velocity is constant until an external force acts on an object
   (c) Force is equal to mass times acceleration
   (d) For every action there is an equal and opposite reaction

(Circle the correct answer or fill in the missing words.
Question 1 is worth 4 points, question 7 is worth 2 points
And the remainder are 1 point each)

(_____ / 12)

Review

1. The secondary control that changes the camber of the wing and reduces the stalling speed of the aircraft is the _____ .

2. Four different types of flaps are _____ , _____ , _____ and _____ . (4 points)

3. The flaps will increase / decrease the lift of the wing and increase / decrease the stall speed of the wing (2 points).

4. Which of the following is NOT a secondary control surface;
   (a) Elevator Trim Tab
   (b) Aileron
   (c) Airbrake
   (d) Spoiler

5. Flaps are located on the _____ _____ of wing.

6. The Trim Tab most commonly found on light aircraft is the;
   (a) Aileron Trim Tab
   (b) Rudder Trim Tab
   (c) Flap Trim Tab
   (d) Elevator Trim Tab

(Circle the correct answer or fill in the missing words. Question 2 is worth 4 points, question 3 is worth 2 points and the remainder are 1 point each)

(_____ / 10)

Review — Meteorology

1. Wind is caused by;
   (a) Differences in atmospheric pressure
   (b) The Earth's rotation
   (c) Volcanoes
   (d) Clouds

2. Cloud cover is measured in _____ or eights.

3. Mid Level clouds are usually prefixed _____ .

4. An actual observation of the weather at a particular place and time is a _____ _____ .

5. Wind Speed and direction is measure in ;
   (a) Knots in the direction the wind is blowing from
   (b) Kilometres per hour in the direction the wind is blowing from
   (c) Kilometres per hour in the direction the wind is blowing to
   (d) Knots in the direction the wind is blow to

6. Pilots will always try to take off and land into / with the wind .

7. A prediction of future weather conditions based on previous observations is called a weather forecast (True / False)

8. Visibility can be affected by;
   (a) Rain
   (b) Dust
   (c) Smoke
   (d) All of the above

9. Rain-bearing clouds are named n_____ .

10. Freezing rain is dangerous to flying because ;
    (a) It can cause the engine to stop
    (b) It will freeze on contact with the wing, reducing the lift produced
    (c) It indicates storms ahead
    (d) The pilot will catch a cold

11. High Level Clouds are found above _____ feet .

12. CAVOK means?
    (a) The Control Tower can hear you loud and clear
    (b) No clouds below 5000ft
    (c) No clouds below 10000 ft, visibility greater than 10km and no significant weather
    (d) No clouds below 5000 ft, visibility greater than 10km and no significant weather

(Circle the correct answer or fill in the missing words)

(____ / 12)

Review—AAL Uniform Awards and Brevets

1. Colour in the following ribbon bars (4 points)

Distinguished Service Award	Meritorious Service Award	Service Medal 10 Year Officer	Service Medal 10 Year General

2. The highest award that can be given to a member is _____ _____ .

3. Service Awards are worn over the left / right breast pocket .

4. A member is a cadet in the AAL for 4 years, leaves for 4 years and then returns as an Officer for 2 years. Are they eligible for the Service Medal 10 Years General? (Yes / No).

5. The AAL Technical Award (Silver) is issued to;
   (a) Pilots
   (b) Cadets who complete all Education badges
   (c) Licensed Aircraft Maintenance Engineers
   (d) None of the above

6. The Duke of Edinburgh Award is available in three levels, B_____ , S_____ and G_____.

7. Pilots who fly both powered aircraft and gliders are entitled to wear both brevets at the same time (True / False)

8. The AAL Silver Half Wing is worn by;
   (a) Pilots who haven't learn how to land yet
   (b) Flight Attendants
   (c) Co Pilots
   (d) Student Pilots

(Circle the correct answer or fill in the missing words. Question 1 is worth 4 points, the remainder are 1 point each)

(____ / 11)

My Group

My Group is called _____

The Wings in my Group are _____

_____

_____

_____

_____

My Group Patron is _____

My Group

Group Executive Commissioner _____

Chairman of the Group Council _____

Group Operations Commissioner _____

Group Administration Commissioner _____

Group Field Commissioner _____

Group Physical Activities Commissioner _____

Group Education Commissioner _____

Group Finance Commissioner _____

Group Air Activities Commissioner _____

Group Training Commissioner _____

Group Regional Commissioner _____

Review — Group Organisation

1. The optimal rank for the Group Executive Commissioner is;
   (a) Group Lieutenant
   (b) Group Commissioner
   (c) Lieutenant Commissioner
   (d) Commissioner

2. A Group is made up of W_____ .

3. The body that administers the Group is the G_____ C_____ .

4. The Group Council is presided over by the C_____ .

5. The Group Staff tab to the right is worn by the;
   (a) Group Field Commissioner
   (b) Group Chairman
   (c) Group Education Commissioner
   (d) All Commissioners

6. The Commissioner who assists the Group Executive Commissioner in all matters concerning the Group, receives correspondence and ensure the Group staff carry out their roles is the G_____ _____ _____ .

7. The Group Field Commissioner is responsible for NCO promotions (True / False)

8. The silver Rank Slide shown to the right is;
   (a) Squadron Lieutenant
   (b) Commissioner
   (c) Group Lieutenant
   (d) Lieutenant Commissioner

9. For their initial Officer Promotion, a member would be examined by the G_____ G_____ P_____ B_____.

10. The Group Staff tab to the right is NOT worn by which Commissioner?
    (a) Group Physical Activities Commissioner
    (b) Group Field Commissioner
    (c) Group Operations Commissioner
    (d) Group Finance Commissioner

11. The Group Executive Commissioner is allow to promote Commissioners (True / False) .

12. Which Commissioner is responsible for preparing Group Routine Orders?
    (a) Group Operations Commissioner
    (b) Group Commissioner
    (c) Group Executive Commissioner
    (d) Group Administration Commissioner

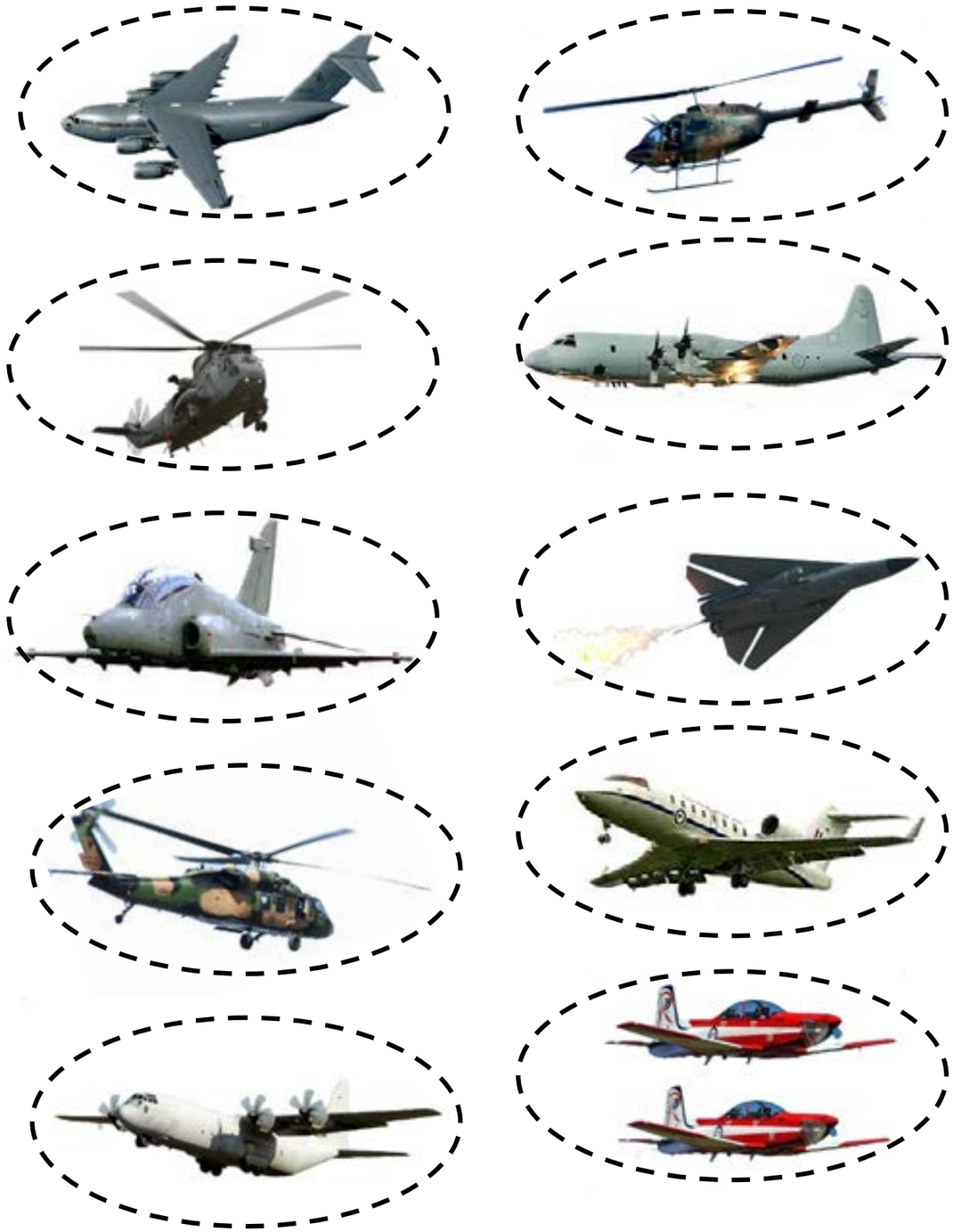
(Circle the correct answer or fill in the missing words)

TOTAL BOOK MARK
To obtain the total book, total all of the Review Questions points gained in this Workbook (excluding uniform inspection) then divide by 10

(_____ / 12)

_____ divided by 10 = (_____ / 10)

Cut these images out so you don't need to cut up your GP3 workbook.



General Proficiency 2

Review Questions

Edition 06/2014

Home Cooking Class 3

Review Questions

Edition HC3/3/January 2011

All Questions worth 1 Mark Each

1. When in the kitchen, what should you do? (____ / 25)

   (a) Run
   (b) Walk
   (c) Move cautiously

2. When washing sharp tools, you should:

   (a) Wash them separately
   (b) Keep them all together
   (c) Put them with other utensils

3. What is the most important thing you must do before handling food and why?

   _____

   _____

4. What are four things that can cause possible dangers when handling heat?

   1. _____ 3. _____

   2. _____ 4. _____

5. Name 2 ways of how we store food.

   1. _____

   2. _____

6. What health and safety tips should you follow before cooking?

   _____

   _____

   _____

7. List three hazards in the kitchen

   1. _____

   2. _____

   3. _____

8. When handling sharp knives you should:
   (a) Pick it up by the handle
   (b) Leave knives on their side
   (c) Always cut away from you
   (d) All of the above

9. When you have finished cooking, what must you remember to do?

   _____

   _____

   _____

10. What are the five basic food groups?

    1. _____ 4. _____

    2. _____ 5. _____

    3. _____

11. Draw or paste two foods from each of the five food groups.

12. Before you cook fruit and vegetables, what should you do?
    (a) Wash all fruit and vegetables
    (b) Peel and chop them
    (c) Wipe them with a paper towel

13. How many servings of vegetables, should you have every day?
    (a) 6 – 11
    (b) 2 – 3
    (c) 3 – 5
    (d) 1 – 2

14. Milk, Cheese and Yoghurt are important for:
    (a) Strong bones
    (b) Teeth
    (c) Muscles
    (d) All of the above

15. What sources of vitamins and minerals are in fruit and vegetables?

    _____

    _____

16. What food is high in Protein, low in saturated fat and a good source of Omega 3?
    (a) Meat
    (b) Chicken
    (c) Fish

17. Vitamin A is needed for

    _____

    _____

    Vitamin D is necessary for

    _____

    _____

    Iron is necessary for

    _____

    _____

18. The Vitamin that helps fight infection is:
    (a) K
    (b) E
    (c) C
    (d) B

19. List 5 Good Foods and 5 Bad Foods

1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____
5. _____	5. _____

Steps to a Healthier You

My Fruit and Vegetable Goals

Fruits

20. **Circle the names of the fruits you have eaten:**
Mango papaya kiwifruit cantaloupe star fruit pineapple strawberry blueberry banana
Other fruits I have eaten:

_____

_____

21. **Write the name of a fruit you would like to try:**

_____

_____

22. **How will you eat this fruit?** *(Perhaps on cereal, as a snack, for dessert, with dinner, or on pancakes.)*

_____

_____

Vegetables

23. **Circle the names of the vegetables you have eaten:**
Spinach beans sweet potato pumpkin broccoli carrot zucchini squash
Other vegetables I have eaten:

_____

_____

24. **Write the name of a vegetable you would like to try:**

_____

_____

25. **How will you eat this vegetable?** *(Perhaps for a snack, as a salad, with dip, or for lunch.)*

_____

_____

Meteorology Class 4

Review Questions

Edition MET4/02 January 2011

For all of the questions listed below, put a cross in the box next to the answer that you think is correct.

1. What is the name of a person who studies the weather?

	Weatherologist
	Cloudologist
	Meteorologist

2. What is the name of the lowest level in the Earths atmosphere?

	Troposphere
	Stratosphere
	Tropopause

3. Which level of the atmosphere holds the most water vapour?

	Troposphere
	Stratosphere
	Tropopause

4. What is the name of the instrument that measures atmospheric pressure?

	Thermometer
	Pressureometer
	Barometer

5. What sort of clouds are fluffy and puffed up?

	Cumuliform
	Cloudiform
	Stratiform

Workbook Questionnaire _____ / 20
Practical Work _____ / 20

6. Which of the following is **'Not'** a sort of precipitation?

	Rain
	Drizzle
	Haze

7. A sudden and very strong change in the wind direction or speed is sometimes called a what?

	Gust
	Lull
	Squall

8. Which of the following will reduce the visibility the most?

	Haze
	Fog
	Mist

9. What is the name of the line that joins places of equal atmospheric pressure?

	Isotherm
	Isobar
	Contour Line

10. Which regional pressure system has rising air?

	High
	Low
	Ridge

Practical Work - Weather Observation

For a period of two weeks, you must record the weather that happens each day.

Try to record your observations at the same time every day.

For the wind and rain, circle the best word. For the temperature, look at the daily weather report for your city. For the cloud, look at the sky and circle the picture that best describes the sky.

Day One		Day Two	
Did it rain today? Yes / No	**Wind:** Calm / Gentle / Strong	**Did it rain today?** Yes / No	**Wind:** Calm / Gentle / Strong
Highest Temperature (°C) =		**Highest Temperature** (°C) =	
Cloud  Clear Mostly Sunny Mostly Cloudy Overcast		**Cloud**  Clear Mostly Sunny Mostly Cloudy Overcast	
Anything Else? (EG: Fog or Thunderstorm)		**Anything Else?** (EG: Fog or Thunderstorm)	

Day Three		Day Four	
Did it rain today? Yes / No	**Wind:** Calm / Gentle / Strong	**Did it rain today?** Yes / No	**Wind:** Calm / Gentle / Strong
Highest Temperature (°C) =		**Highest Temperature** (°C) =	
Cloud  Clear Mostly Sunny Mostly Cloudy Overcast		**Cloud**  Clear Mostly Sunny Mostly Cloudy Overcast	
Anything Else? (EG: Fog or Thunderstorm)		**Anything Else?** (EG: Fog or Thunderstorm)	

Day Five		Day Six	
Did it rain today? Yes / No	**Wind:** Calm / Gentle / Strong	**Did it rain today?** Yes / No	**Wind:** Calm / Gentle / Strong
Highest Temperature (°C) =		**Highest Temperature** (°C) =	
Cloud  Clear Mostly Sunny Mostly Cloudy Overcast		**Cloud**  Clear Mostly Sunny Mostly Cloudy Overcast	
Anything Else? (EG: Fog or Thunderstorm)		**Anything Else?** (EG: Fog or Thunderstorm)	

Day Seven		Day Eight	
Did it rain today? Yes / No	**Wind:** Calm / Gentle / Strong	**Did it rain today?** Yes / No	**Wind:** Calm / Gentle / Strong
Highest Temperature (°C) =		**Highest Temperature** (°C) =	
Cloud Clear Mostly Sunny Mostly Cloudy Overcast		**Cloud** Clear Mostly Sunny Mostly Cloudy Overcast	
Anything Else? (EG: Fog or Thunderstorm)		**Anything Else?** (EG: Fog or Thunderstorm)	

Day Nine		Day Ten	
Did it rain today? Yes / No	**Wind:** Calm / Gentle / Strong	**Did it rain today?** Yes / No	**Wind:** Calm / Gentle / Strong
Highest Temperature (°C) =		**Highest Temperature** (°C) =	
Cloud Clear Mostly Sunny Mostly Cloudy Overcast		**Cloud** Clear Mostly Sunny Mostly Cloudy Overcast	
Anything Else? (EG: Fog or Thunderstorm)		**Anything Else?** (EG: Fog or Thunderstorm)	

Day Eleven		Day Twelve	
Did it rain today? Yes / No	**Wind:** Calm / Gentle / Strong	**Did it rain today?** Yes / No	**Wind:** Calm / Gentle / Strong
Highest Temperature (°C) =		**Highest Temperature** (°C) =	
Cloud Clear Mostly Sunny Mostly Cloudy Overcast		**Cloud** Clear Mostly Sunny Mostly Cloudy Overcast	
Anything Else? (EG: Fog or Thunderstorm)		**Anything Else?** (EG: Fog or Thunderstorm)	

Day Thirteen		Day Fourteen	
Did it rain today? Yes / No	**Wind:** Calm / Gentle / Strong	**Did it rain today?** Yes / No	**Wind:** Calm / Gentle / Strong
Highest Temperature (°C) =		**Highest Temperature** (°C) =	
Cloud		**Cloud**	

Physics Class 3

Review Questions

Edition Physics3 / November 1996

Lesson 1 Questionnaire (2 Marks)

1.1 What is Isaac Newton's 1st Law of Motion? .....

.....

.....

1.2 What did Aristotle wrongly suggest that all matter was made up of? .....

.....

1.3 What are the three (3) particles in an atom and what are their electrical charges?

1.....(.....) 2.....(.....) 3.....(.....)

1.4 Write the chemical formula for a water molecule? .....

1.5 Who is often referred to as "The Founder of Modern Mechanics?" .....

1.6 An object at ..... or one which is moving in a ..... line at a ..... speed will remain in that state unless a ..... acts upon it.

1.7 A molecule is a ..... atoms chemically ..... together by to create a substance.

1.8 Newton's third law states that whenever a ..... is applied then there is always an ..... force acting in the ..... direction.

1.9 ..... the inventor of the telescope and the foundation for the invention of ..... was known as the ..... of ..... Mechanics.

Lesson 2 Questionnaire (2 Marks)

2.1 Centrifugal force is a force which acts at *90* degrees to the .....

of motion, ... from the centre of the circle of motion.

2.2 The Centre of Gravity (*CG*) of an object is said to be the .....through

which the entire ..... of the object acts. It is the ..... point.

2.3 Zero degrees Kelvin is equivalent to what in degrees Celcius? .....

2.4 Heat travels in liquids and gases by .....

2.5 ..... force acts at 90 degrees to the direction of .....and

directed to the .....of the circle of motion.

2.6 Kinetic Energy is the energy of .....and is expressed KE=.....

2.7 Potential energy is the ..... stored in an object that enables that object

to do ..... Potential energy is gained by an object when it ..... above ground

level and is expressed as PE = ...

2.8 Heat is ..... from one object to another by .....

Lesson 3 Questionnaire (2 Marks)

3.1 Explain the relationship between velocity and pressure in a Venturi Tube? .....

.....

3.2 Which important principle did Archimedes discover? .....

.....

3.4 Robert Boyle discovered the ..... between pressure, ... and

..... led to his law: In given ..... of gas at a .....

temperature, the ..... is inversely ..... to the pressure.

3.5 Bernoulli's Principle stated that As the *velocity* increases the pressure

..... and as the velocity .....the ..... increases.

3.6 The amount of change in either volume or .....is directly related

to the change in absolute .....

3.7 The three terms generally used in reference to buoyancy are:

- positive buoyancy ... indicating a tendency to .....
- negative buoyancy ... indicating a tendency to .....
- neutral buoyancy ... which reflects a condition of balance wherein an object will neither ..... nor .....but will remain ..... at any particular depth.

3.8 A Venturi tube has a total of pressure and airspeed is 500. At a particular point the airspeed is 200 and the pressure is .....

3.9 The static ..... over much of the top surface of an aerofoil is

..... when compared to the ..... static pressure of the free air

stream well away from the aerofoil

Lesson 4 Questionnaire (2 Marks)

4.1 Draw a small sketch of a concave lens and the direction a source of light will follow through it (changes in direction must be shown)

4.2 Draw the behaviour of light rays striking a convex mirror.

4.3 What is the Refraction Index of light?.....

.....

4.4 Light entering a prism "splits" into ..... colours? What are these colours?

.....

4.5 The Angle of ..... and the *Angle* of reflection are <u>always</u>.....

4.6 The Sun gives off a range of radiations of different wavelengths known by Physicists as the .....

4.7 The portion of the Sun's .....which is visible (..... light) is only ..... of the complete Spectrum.

4.8 In a low frequency wave the crests and troughs are ..... apart compared to a ..... frequency wave the crests and troughs are ..... together.

4.9 There is an ..... relationship between .....and frequency; that is, as one .....the other decreases.

4.10 The speed of electric waves in free space is approximately ....00,000 klm/second.

4.11 Ultra-Violet light has a lower or ..... frequency compare to Infrared light?

4.12 The convex is a .....mirror while the concave is a ..... mirror.

4.13 Light bends towards the normal when it enters a .....dense medium. In the case of light entering a less dense medium it will bend ..... from the normal.

Lesson 5 Questionnaire (2 Marks)

5.1 What is EMF the abbreviation? What is it? .....

.....

5.2 What happens when two North Poles of a magnet are bought near each other?

.....

5.3 Who developed the first Battery? .....

5.4 Which way do electrons flow in an electrical circuit? .....

.....

5.5 Michael Faraday discovered lines of electrical force from .....

5.6 Field strength obeys an ..... If you .....the distance from the magnet, the force is reduced .....-fold.

5.7 The Ampere is the to measure .....current.

5.8 When bar magnets are moved together .....poles attract each other.

5.9 The unit for measuring electromotive force is called the .....

5.10 The electric .....was invented in 1800 by Alessandro .....

5.11 When a magnet is suspended it will align with the earth's .....

5.12 A substance that will allow electrons to flow through it is called a .....

5.13 An .....does not allow these electrons to flow as easily

5.14 The friction in an electrical circuit is call .....

5.15 If the voltage is increased in a circuit of fixed resistance the current .....

5.16 The effect of turning kinetic energy into electrical energy is called

.....

Workbook Questionnaire _____ / 10

Rotary Wing Class 3

Review Questions

RW3/01/July 2020

Complete the following sentences:

1. Children have been playing with helicopter like toys since at least _____.
2. Juan de la Cierva is known as the inventor of the _____.
3. Transport helicopters are useful because they can land in places that don't have a _____
4. The collective lever controls the thrust on the main rotors allowing a helicopter or autogyro to go _____ and _____
5. Gyros have a _____ that controls yaw while most helicopters use a tail (anti-torque)_____
6. In which year did the Focke Achgelis Fa 61 first fly? _____
7. The Cyclic controls pitch (forward and back) as well as roll to the _____ and _____ (marks)
8. Igor Sikorsky flew his VS-300 design in which year? _____
9. What is the rotational force called that tries to turn the helicopter's fuselage in the opposite direction to the Main Rotor blades? _____

Circle the correct answer:

10. The Autogyro was successfully flown before the helicopter (True/False)
11. If the helicopter's engine stops it can land safely because of autorotation/parachutes
12. In flight, air flows upwards/downwards through an Autogyro's rotor blades
13. Autogyros can hover like a helicopter (True/False)
14. Igor Sikorsky is often called the 'father' of the helicopter/autogyro
15. Only helicopters can be used for agricultural work such as crop dusting or mustering (True/False)

Workbook Questionnaire _____ / 15

Build a Paper Autogyro

Photocopy this page and cut out the Autogyro, then follow these steps:

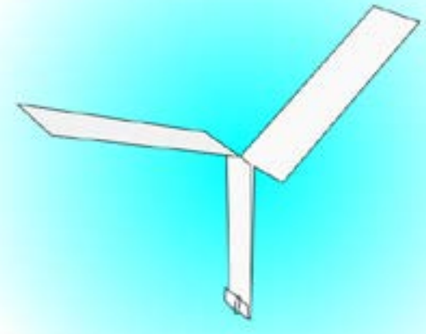
1. *Cut along the solid line between **A** and **B**. Don't cut past the dotted line!*
2. *Cut along the solid lines above **C** and **D**. Again, don't cut past the dotted lines*
3. *Fold tabs **A** and **B** along the dotted line in opposite directions to form the rotor blades*
4. *Fold **C** and **D** around the middle of the Autogyro so that the tabs overlap to form the fuselage*
5. *Fold the bottom of the Autogyro up, along the dotted line*
6. *Place a paper clip on the bottom fold*

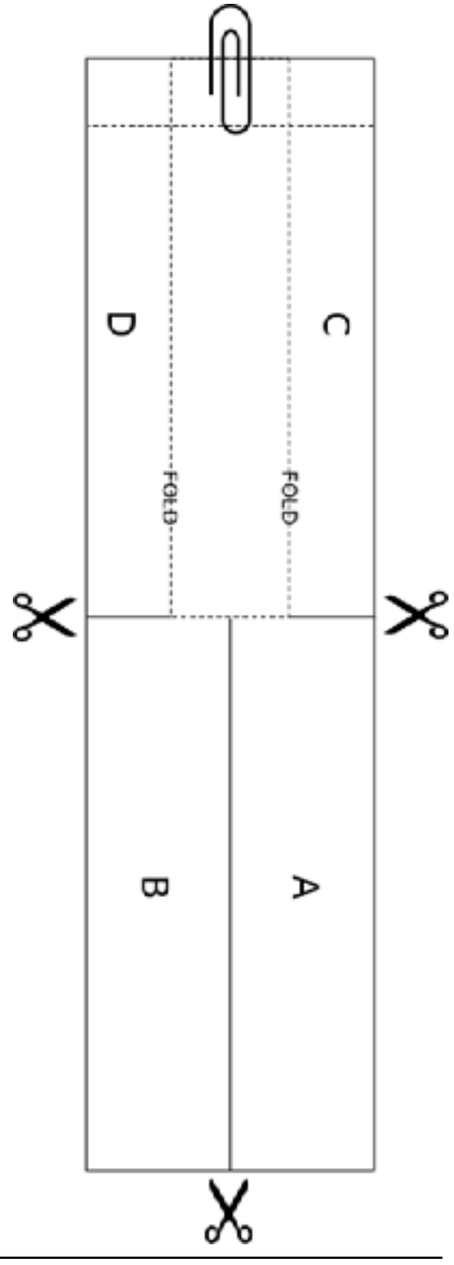
Finished!

To fly the Autogyro, throw it into the air and watch it spin down in auto-rotation. Experiment with the following:

- Add more paper clips and observe the change in rotation and descent speeds
- Fold the rotor blades flatter or angle the further upwards and observe the effect
- Fold the rotor blades, part way along to shorten them and observe how much faster the Autogyro descends.

Show your instructor how your Paper Autogyro flies and they will mark it.





Sewing 3,2,1

Review Questions

Sewing 3,2,1 -July 2016

Fabrics - Practical

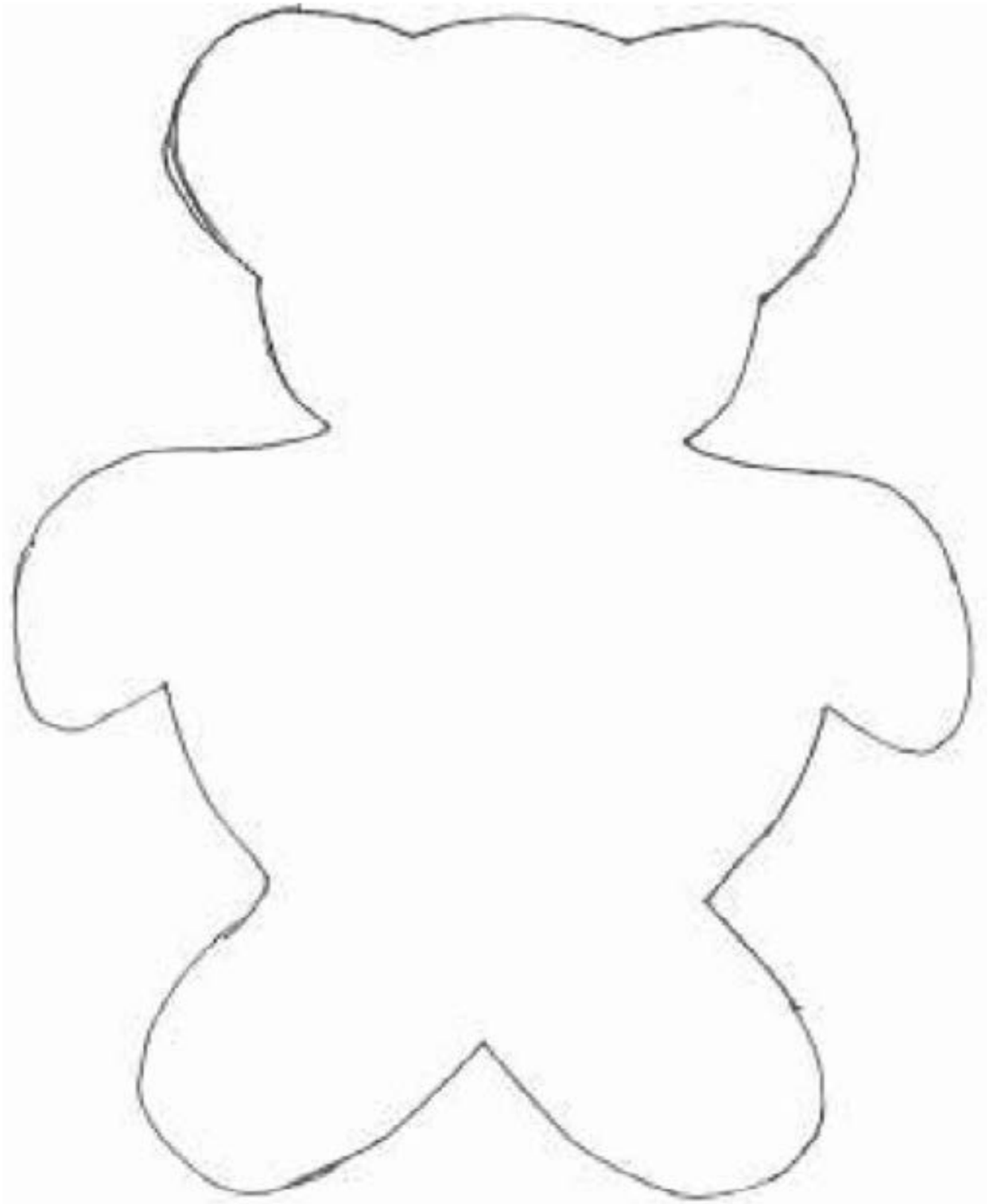
Collect four samples of fabric and paste them below, label them with Name, Fibre Type and Use.

Under supervision of an officer, conduct a burn test on separate samples of the same fabrics and see if your results are the same as in the text. If not record your results. (5 marks)

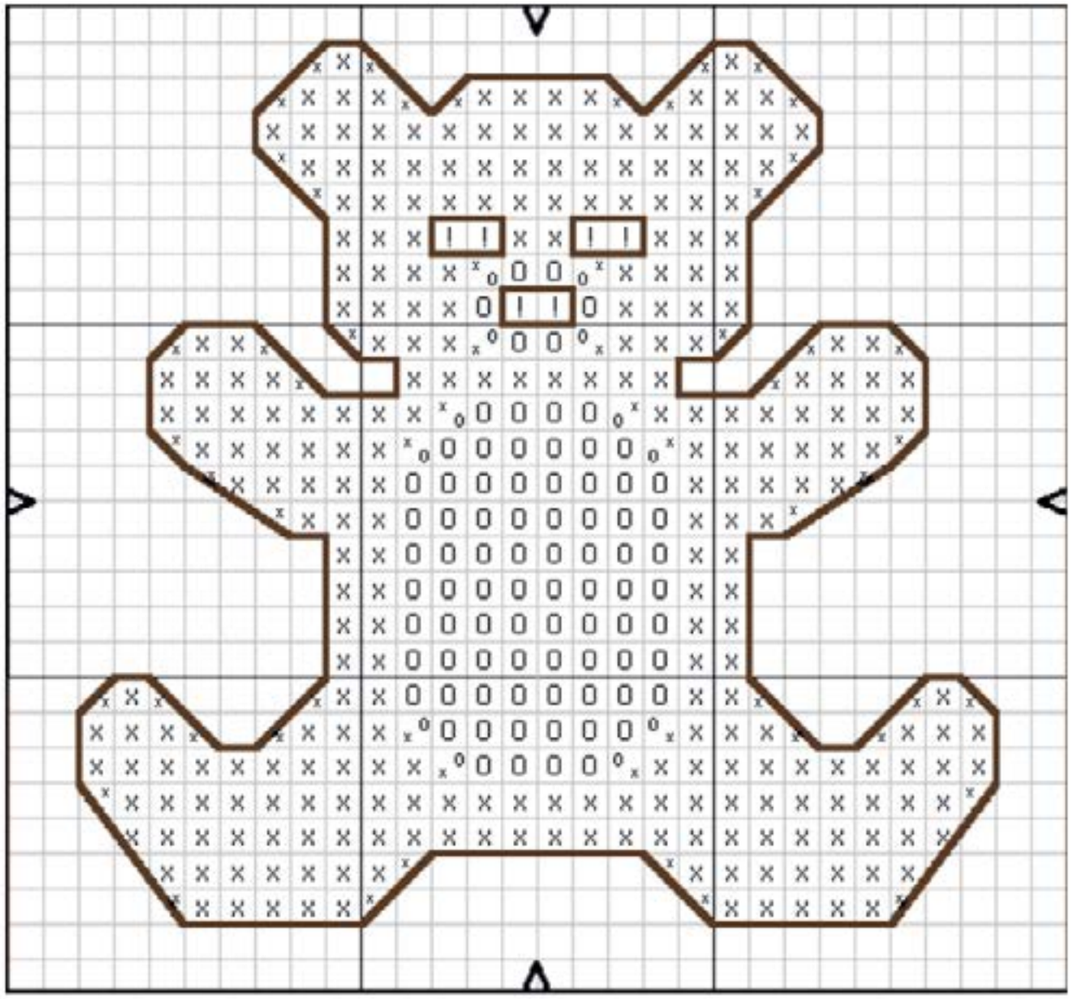
Burn Test Results

Gathering Your Equipment - Practical

List below the essential items that you would need for your sewing box. (5 marks).



Teddy Bear



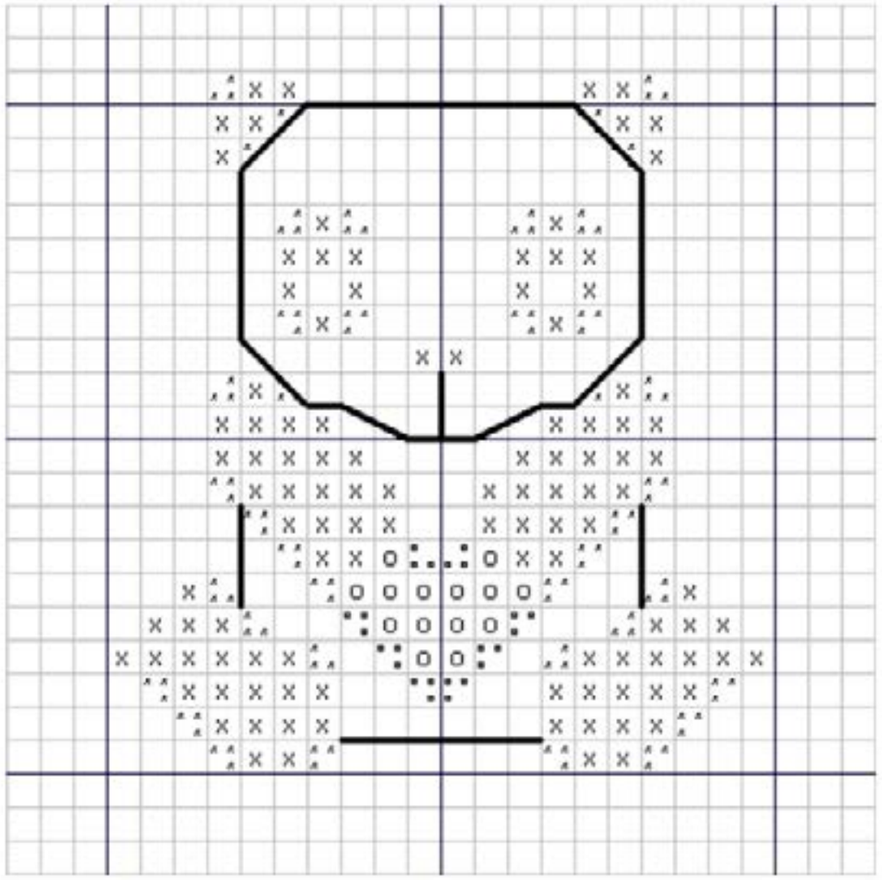
TEDDY BEAR CROSS STITCH PATTERN

X = Light Brown O = Cream ! = Dark Brown

Cross stitch using two strands of floss.
For tiny symbols, use ½ stitches.
Outline with one strand of dark brown floss.

CROSS STITCH EXAMPLES

Panda Bear

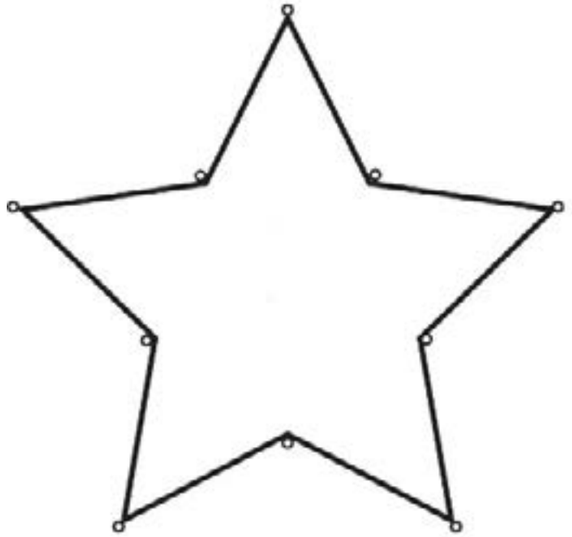


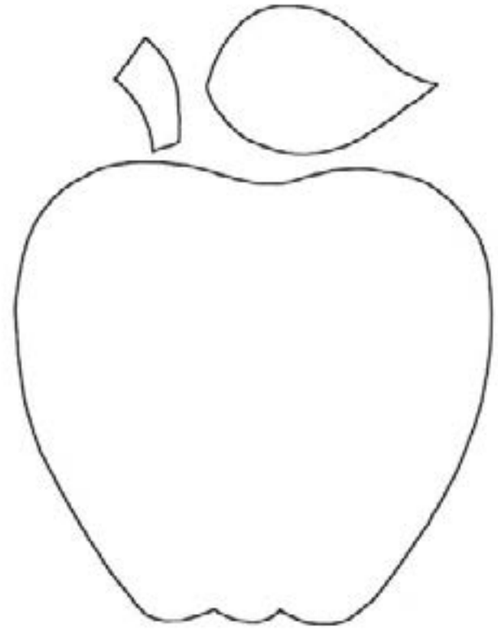
PANDA CROSS STITCH PATTERN

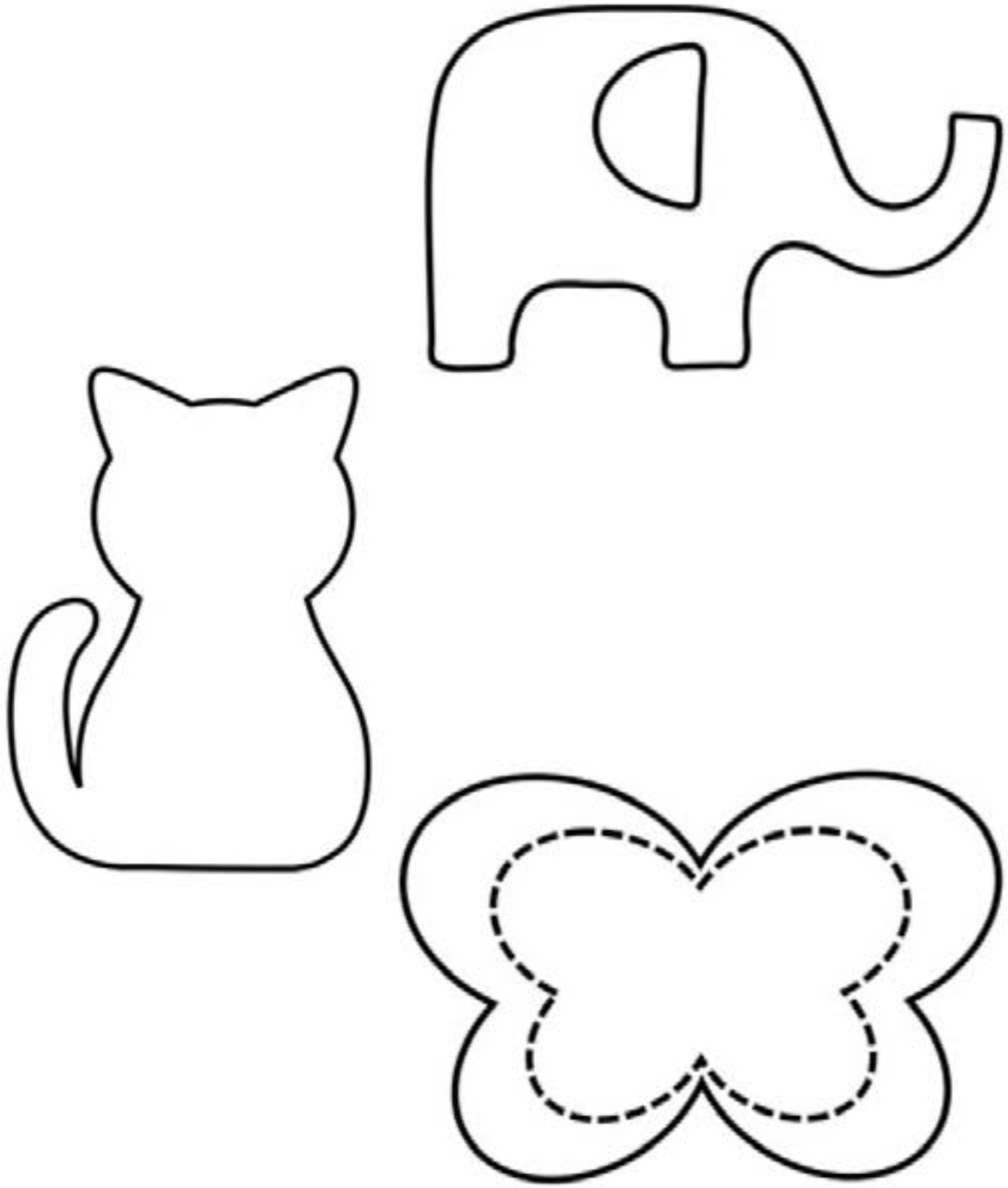
X = Black O = Red

Cross stitch whole and ¾ stitches using two strands of floss.
Outline areas marked with one strand of black floss.

APPLIQUE TEMPLATES







Space Flight Class 4

Review Questions

SF4/01/July 2020

Review

1. The largest planet in our solar system is _____ .
2. The two main types of rockets are _____-fuel and _____ -fuel rockets.
3. The first rockets were invented by the _____ .
4. The first artificial satellite launched into space was _____.
5. The first US space capsule was;
   a. Dragon
   b. Apollo
   c. Millenium Falcon
   d. Mercury
6. The first man to step on the Moon was ;
   a. Yuri Gagarin
   b. Neil Armstrong
   c. Buzz Lightyear
   d. Chuck Yeager
7. The space telscope launched by NASA in 1990 was the _____ _____ _____.
8. Which Space Shuttle was named after the sailing ship captained by Lt. James Cook when he landed in Australia in 1770;
   a. Discovery
   b. Endeavour
   c. Atlantis
   d. Enterprise
9. The first space station launched and operated by the United States was;
   a. Mir
   b. Skylab
   c. International Space Station
   d. Apollo
10. The space craft built by SpaceX to take astronauts to space is;
    a. Falcon 9
    b. Dragon
    c. SpaceShipOne
    d. Orion

Workbook Questionnaire _____ / 10

Space Flight Class 3

Review Questions

Edition SF3/May 2003

Review—Nature of Space

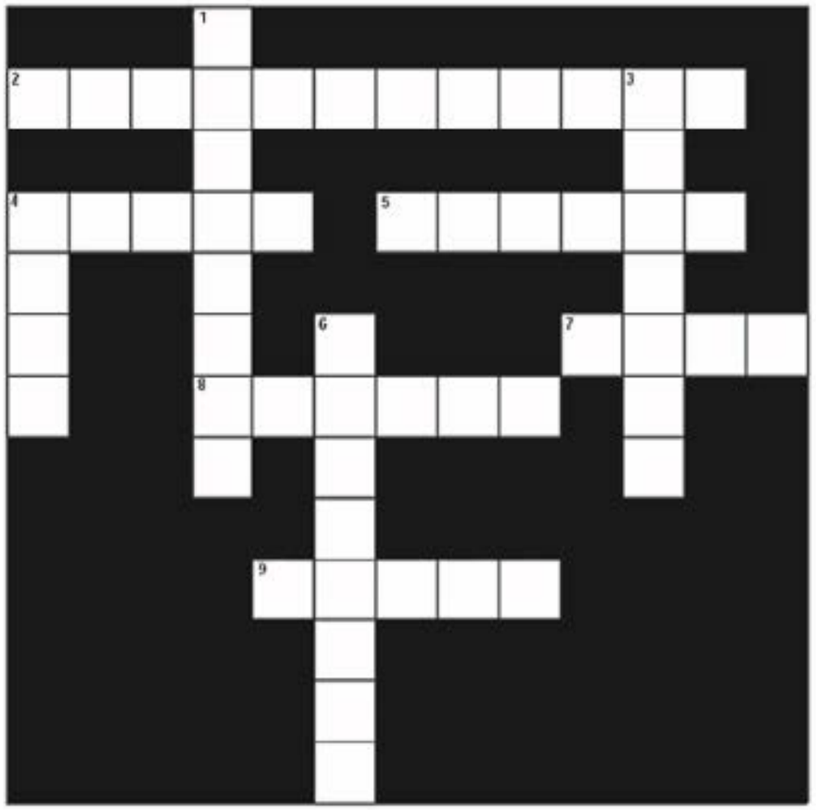
1. Name each of the planets in order from the Sun (½ mark each)

   1. _____ 6. _____
   2. _____ 7. **Uranus**
   3. **Earth** 8. _____
   4. _____ 9. _____
   5. **Jupiter**

2. Our galaxy is call the _____. (1 mark)
3. Planets revolve around the Sun in an ellipse / circle. (1 mark)
4. _____ is also known as the *Morning* or *Evening Star*. (1 mark)
5. The moons of Mars are: (1 mark)
   (a) Pluto and Deimos
   (b) Europa and Phobos
   (c) Phobos and Deimos
   (d) Charon and Titan
6. Irregular rocky objects orbiting around the sun are _____ while the balls of dust and ice orbiting the sun are _____. (1 mark)
7. The only other body in the Solar System that has been visited by humans is _____. 1 mark)
8. _____ is best known for its beautiful ring system. (1 mark)

(___ / 10)

Review— How a Rocket Works



Questions

A rocket is powered by the combustion of two propellants, a _____ (4 down) and a _____ (3 down).

Rocket propellants can either be _____ (5 across) or _____ (9 across).

Newton's First Law– *Objects at rest will stay at rest and objects in motion will stay in motion in a straight line unless acted upon by an unbalanced* _____ (4 across)

Newton's Second Law– *Force is equal to* ____(7 across) *times* _____ (2 across)

Newton's Third Law– *For every action there is equal and opposite* _____(1 down)

Common liquid propellants are _____(6 down) and _____(8 across)

(___ / 10)

Review— The History of Rockets

1. The first use of rockets was by the _____ in 1232 against the _____. (2 marks)
2. Gunpowder is made from _____, _____ and _____. (3 marks)
3. *Spin stabilisation* was developed by _____ ____, removing the need for guide sticks on rockets. (1 mark)
4. _____ _____ designed rockets for the British military (1 mark)
5. The science fiction book *"From the Earth to the Moon"* was written by the author _____ _____. (1 mark)
6. The man acknowledged as *"The Father of Modern Astronautics"* was Russian mathematics teacher _____ _____. (1 mark)
7. _____ _____'s book *"Rocket into Interplanetary Space"* inspired _____ ___ _____ to become a space pioneer. (2 marks)
8. The first flight of a liquid propelled rocket was on the 16th March ____. (1 mark)
9. Robert Goddard developed a _____ for guidance, heat resistant _____ to control the rocket and used _____ _____ to supply liquid propellants to the rocket engine. (3 marks)

(___ / 15)

Review—German Rocket Advances

1. German rocket scientists were led by _____ ___ _____. (1 mark)
2. The German V-2 was powered by _____ _____ and _____. (2 marks)
3. The technique of cooling the engine by pumping alcohol fuel through thin tubes is called _____ _____. (1 mark)
4. The first V-2 launch against Western Europe was on 7th September ____ (1 mark)
5. The turbo pumps supplying the rocket engine with propellant are powered by _____. (1 mark)

Review—US and Soviet Rockets

1. The first man in space was (1 mark)
   a. John Glenn
   b. Sergei Korolev
   c. Alan Shepard
   d. Yuri Gagarin
2. Which American astronaut missed out on flying in Project Mercury? (1 mark)
   a. Virgil Grissom
   b. Gordon Cooper
   c. Donald Slayton
   d. Walter Shirra
3. In 19__, John Glenn became the first American to orbit the Earth. (1 mark)
4. The Mercury capsules were launched atop _____ or _____ rockets. (1 mark)
5. Name the following spacecraft: (4 marks)

1 2 3 4

Sputnik 1 ___ Mercury ___ Vostok ___ Explorer 1 ___

6. ICBM stands for I____ C_____ B_____ M_____ (1 mark)
7. The WAC _____ rocket was launched upon a V2 as a second stage (1 mark)
8. The last American to fly alone into space was (1 mark)
   a. Gordon Cooper
   b. Virgil Grissom
   c. Neil Armstrong
   d. John Young

(___ / 8)

Theory of Flight Class 4

Review Questions

TF4/2008/03 – January 2011

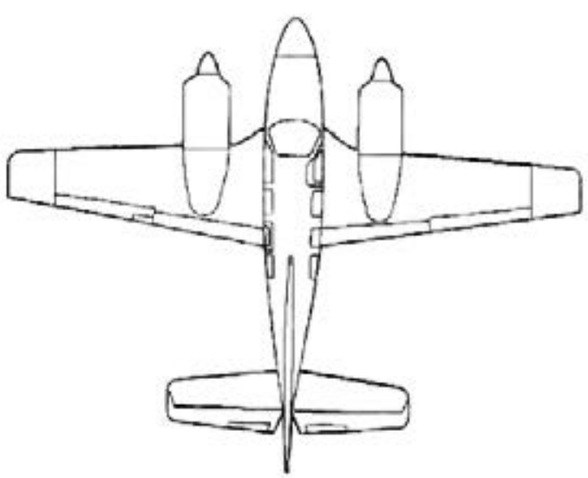
1. What is the name given to the study of how air flows around an aircraft? Put a cross in the box next to the answer you think is correct.

	Aerology
	Aerodynamics
	Aerobatics

2. What is the special name given to how much the wing curves? Put a cross in the box next to the answer you think is correct.

	Chord
	Curvature
	Camber

3. Draw an arrow from the names of the control surfaces to where they are on the aircraft.



Ailerons	Elevators	Rudder	Trim Tabs	Flaps

Workbook Questionnaire _____ / 10

4. Which one of the following things does not change with the wind? Put a cross in the box next to the answer you think is correct.

	Rate of Climb
	Ground Speed
	Angle of Climb

5. How many axes of control does an aircraft have? Put a cross in the box next to the answer you think is correct.

	Two
	Three
	Four

6. Here are two airports that the aircraft is travelling between. Draw a flight path between the airports that will show a climb, cruise and descent. Make sure you label your lines with the correct names.

Theory of Flight Class 3

Review Questions

TF3 -July 2016

WORKBOOK QUESTIONNAIRE

For all of the questions listed below, put a cross in the box next to the answer that you think is correct. Questions will be awarded half a mark per correct answer.

1. What is the approximate percentage of nitrogen and oxygen in the earth's atmosphere?

78% and 21%	☐
80% and 20%	☐
75% and 25%	☐

2. The boundary between the troposphere and stratosphere is called the:-

Stratopause	☐
Mesopause	☐
Tropopause	☐

3. The four physical properties of the atmosphere that affect the operation of aircraft are:-

Atmospheric pressure, temperature, density and humidity	☐
Density, heat, atmospheric pressure and humidity	☐
Temperature, humidity, clouds and rain	☐

4. The force which molecules exert on a surface area is called:-

Density	☐
Atmospheric pressure	☐
Temperature	☐

5. What changes or tends to change the state of rest or uniform motion of a body?

Acceleration	☐
Velocity	☐
Force	☐

6. Newton's First Law is a statement about:-

Momentum	☐
Inertia	☐
Acceleration	☐

7. Newton's Second Law is a statement about:-

Inertia	☐
Acceleration	☐
Momentum	☐

8. Newton's Third Law is a statement about:-

Acceleration and Reaction	☐
Action and Reaction	☐
Action and Momentum	☐

9. The principle that states "as the air velocity increases, the pressure decreases and as the velocity decreases, the pressure increases" was discovered by:-

Newton	☐
Bernoulli	☐
Cayley	☐

10. The four main forces acting on an aircraft are:-

- Lift, weight, drag and momentum ☐
- Drag, thrust, lift and weight ☐
- Acceleration, lift, drag and weight ☐

11. To produce a lift force to counteract the weight of an aircraft in level flight, the pressure above the wing must be:-

- Less than the pressure below the wing ☐
- Equal to the pressure below the wing ☐
- Greater than the pressure below the wing ☐

12. Increasing the curvature of the upper surface of the wing causes the airflow over it to:-

- Slow down ☐
- Speed up ☐
- Remain the same ☐

13. The straight line joining the leading edge and the trailing edge of an aerofoil section is called the:-

- Camber ☐
- Chord ☐
- Chord line ☐

14. The angle of attack is the angle between the:-

- Wing chord line and the relative airflow ☐
- Relative airflow and the horizontal ☐
- Wing and the fuselage ☐

15. Lift acts at ..... to the relative airflow:-

- 180° ☐
- 90° ☐
- 45° ☐

16. Drag acts at ..... to the relative airflow:-

- 90° ☐
- Parallel ☐
- Opposite direction to ☐

17. Parasite drag comprises of:-

- Form drag, skin friction and interference drag ☐
- Skin friction, induced drag and form drag ☐
- Induced drag, interference drag and form drag ☐

18. The drag produced as a by product in the production of lift is called:-

- Parasite drag ☐
- Induced drag ☐
- Interference drag ☐

19. Air flows around the wingtip from the high pressure area under the wing to the low pressure area above the wing. This creates wingtip:-

- Turbulence ☐
- Vortices ☐
- Uneven airflow ☐

20. The force which is produced by a propeller or jet engine is called:-

- Slipstream ☐
- Power ☐
- Thrust ☐

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