

Exam simulation

Quiz BPL Hot Air - Balloon Pilot License - Communication



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STUDENT NAME:

DATE AND TIME:

01. At high altitude, the complete heating system of a hot-air balloon fails. What maximum rate of descent has to be expected upon reaching ground?

- a) Approximately 2.5 m/s
- b) Approximately 4.5 m/s
- c) Approximately 6.5 m/s
- d) Approximately 2.5 m/s

02. Which of the following statements is correct?

- a) The density of hull air is lower with decreasing environmental pressure
- b) The density of hull air is higher with increasing environmental pressure
- c) The density of hull air is lower than environmental air only if the hull temperature is lower than environmental temperature
- d) The density of hull air is lower than environmental air only if the hull temperature is higher than environmental temperature

03. Which are the different parts of the Aeronautical Information Publication (AIP)?

- a) GEN ENR AD
- b) GEN MET RAC
- c) GEN COM MET
- d) GEN AGA COM

04. What is the minimum flight visibility in airspace "C" for an aircraft operating under VFR at FL110?

- a) 1500 m
- b) 3000 m
- c) 8000 m
- d) 5000 m

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05. What information is broadcasted on a VOLMET frequency?

- a) Meteorological information
- b) NOTAMS
- c) Navigational information
- d) Current information

06. The force resulting from the (positive) difference from load-bearing capacity and weight force, is referred to as:

- a) Upper force
- b) Lift force
- c) Load force
- d) Climb force

07. A flight is called a "visual flight", if the...

- a) Flight is conducted in visual meteorological conditions
- b) Visibility in flight is more than 8 km
- c) Flight is conducted under visual flight rules
- d) Visibility in flight is more than 5 km

08. The majority of aviation accidents are caused by...

- a) Human failure
- b) Technical failure
- c) Geographical influences
- d) Meteorological influences

09. What type of turbulence is typically found close to the ground on the lee side during Foehn conditions?

- a) Clear-air turbulence (CAT)
- b) Turbulence in rotors
- c) Inversion turbulence
- d) Thermal turbulence

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10. The movement of air flowing apart is called...

- a) Divergence
- b) Concordance
- c) Convergence
- d) Subsidence

11. At which altitude is the atmospheric pressure approximately half the MSL value (1013 hPa)?

- a) 5000 ft
- b) 18000 ft
- c) 22000 ft
- d) 10000 ft

12. A pilot can contact FIS (flight information service)...

- a) Via internet
- b) Via radio communication
- c) By a personal visit
- d) Via telephone

13. What has to be done in case the balloon shows a strong tendency to climb while crossing thermals?

- a) It must be heated continuously to maintain hull temperature
- b) It must be heated stronger than usual
- c) The burner has to be cut off immediately
- d) The pull-rope has to be actuated immediately

14. What cause may result in a reduction of volume of a free balloon?

- a) Reduction in mass
- b) A gust
- c) Cooling of environment air
- d) Increase in hull temperature

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15. Which dangerous attitudes are often combined?

- a) Impulsivity and carefulness
- b) Macho and invulnerability
- c) Self-abandonment and macho
- d) Invulnerability and self-abandonment

16. What information can be obtained from satellite images?

- a) Flight visibility, ground visibility, and ground contact
- b) Overview of cloud covers and front lines
- c) Turbulence and icing
- d) Temperature and dew point of environmental air

17. Given: TC: 183°; WCA: +011°; MH: 198°; CH: 200° What are TH and VAR?

- a) TH: 172°. VAR: 004° E
- b) TH: 194°. VAR: 004° E
- c) TH: 172°. VAR: 004° W
- d) TH: 194°. VAR: 004° W

18. A boundary between a cold polar air mass and a warm subtropical air mass showing no horizontal displacement is called...

- a) Warm front
- b) Occluded front
- c) Cold front
- d) Stationary front

19. Which of the following statements is correct?

- a) At higher altitude, sink rate in case of cooling is increased due to less drag by less density
- b) At higher altitude, sink rate by cooling is not increased because due to low density the mass inside the hull is also less
- c) Higher drag at higher altitude prevents increased sink rate in case of cooling
- d) Maximum sink rate must be equal at all altitudes as prescribed by design regulations

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20. The term 'isogonal' or 'isogonic line' is defined as a line on an aeronautical chart, connecting all points with the same value of...

- a) Variation
- b) Inclination
- c) Heading
- d) Deviation

21. A vertical speed indicator measures the difference between...

- a) Instantaneous static pressure and previous static pressure
- b) Dynamic pressure and total pressure
- c) Total pressure and static pressure
- d) Instantaneous total pressure and previous total pressure

22. What information is provided in the part "AD" of the AIP?

- a) Access restrictions for airfields, passenger controls, requirements for pilots, license samples and validity periods
- b) Table of content, classification of airfields with corresponding maps, approach charts, taxi charts
- c) Warnings for aviation, ATS airspaces and routes, restricted and dangerous airspaces
- d) Map icons, list of radio nav aids, time for sunrise and sunset, airport fees, air traffic control fees

23. What effect has an increase in air temperature inside the hull of a hot air balloon by a given difference in temperature?

- a) The increase in load carrying capacity increases with height
- b) The increase in load carrying capacity decreases with height
- c) The increase in rate of climb increases with height
- d) The reduction in sink rate increases with height

24. Which are the official basic units for horizontal distances used in aeronautical navigation and their abbreviations?

- a) Feet (ft), inches (in)
- b) Yards (yd), meters (m)
- c) Nautical miles (NM), kilometers (km)
- d) Land miles (SM), sea miles (NM)

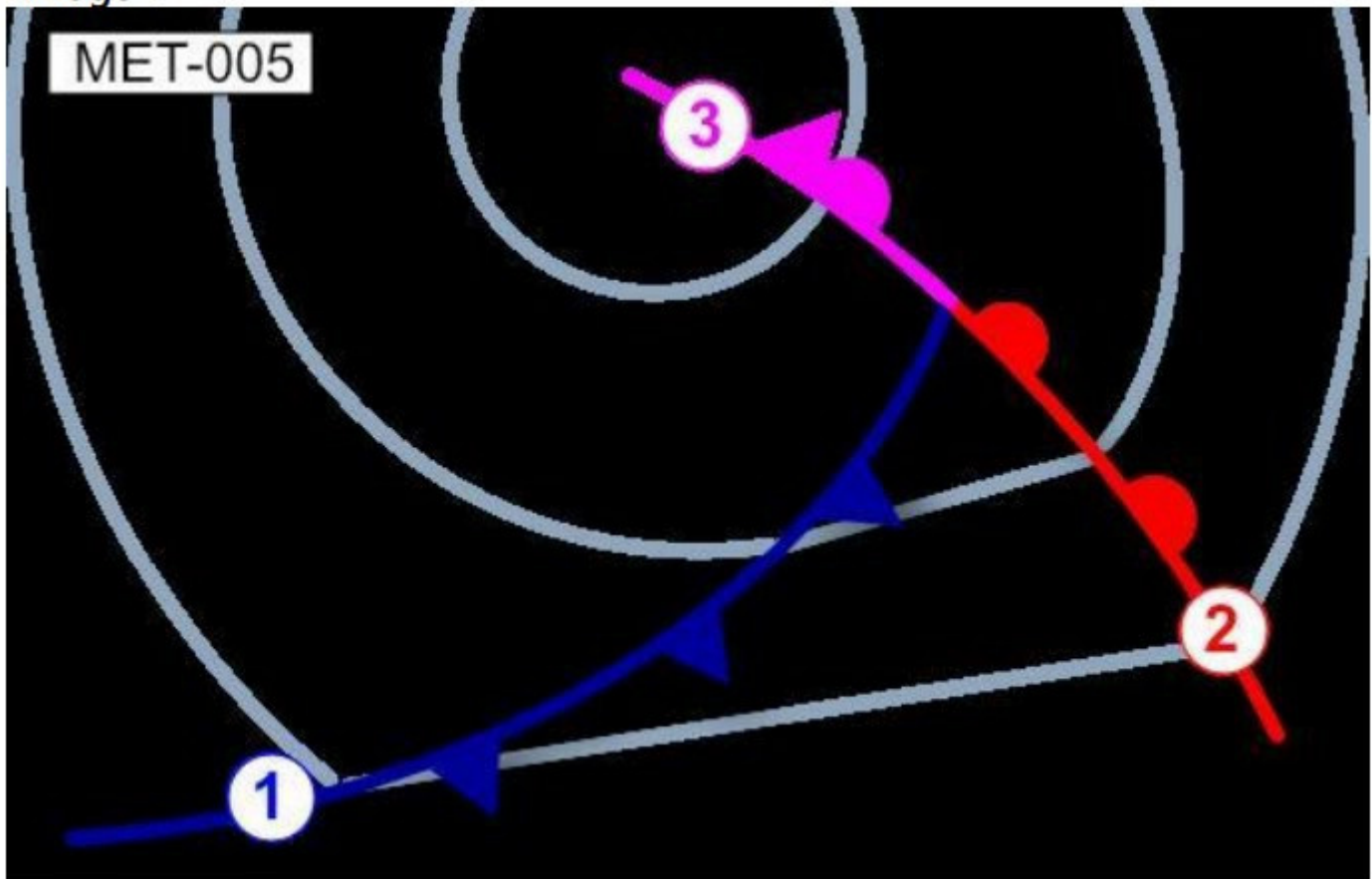
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25. The symbol labeled (1) as shown in the picture is a / an... See figure (MET-005)



- a) Front aloft
- b) Cold front
- c) Occlusion
- d) Warm front

26. What may be the consequence, if gas containers of a hot-air balloon are refilled at temperatures below 0 °C by volume (80%)?

- a) Too low pressure at high temperatures
- b) Less burner power at high temperatures
- c) Smaller volume in the container at high temperatures
- d) Overfilling of the gas container

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27. Which process may result in an inversion layer at about 5000 ft (1500 m) height?

- a) Intensive sunlight insolation during a warm summer day
- b) Ground cooling by radiation during the night
- c) Advection of cool air in the upper troposphere
- d) Widespread descending air within a high pressure area

28. Under which conditions, no hazards should be expected for a balloon ride?

- a) With high pressure areas before sunset
- b) Close to showers or thunderstorms
- c) With a warm front approaching
- d) With a cold front approaching

29. Changing the shape of the envelope of a free balloon, e.g. by a gust, results in:

- a) Increase in lift
- b) Decrease in volume
- c) Increase of displaced air
- d) Decrease in weight

30. The Empty Mass of a gas balloon includes:

- a) Ballast packages, basket, hull, valve and towing rope
- b) Basket, burner, ballast packages, hull, net and towing rope
- c) Basket, basket ring, valve, net, hull and towing rope
- d) Burner, ballast packages, instruments, net and towing rope





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31. (For this question, please use annex PFP-062) According ICAO, what symbol indicates a civil airport (not international airport) with paved runway?

- A 
- B 
- C 
- D 

PFP-062

- a) C
- b) B
- c) D
- d) A

32. Which wind system may be dangerous for balloon rides in the Alps?

- a) Bora
- b) Scirocco
- c) Mistral
- d) Foehn

33. Cold air inflow in high tropospheric layers may result in...

- a) Stabilisation and calm weather
- b) Showers and thunderstorms
- c) Calm weather and cloud dissipation
- d) Frontal weather

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34. With respect to aircraft accident and incident investigation, what are the three categories regarding aircraft occurrences?

- a) Incident, Serious incident, Accident
- b) Event, Serious event, Accident
- c) Happening, Event, Serious event
- d) Event, Crash, Disaster

35. The term 'True Course' (TC) is defined as...

- a) The direction from an arbitrary point on Earth to the geographic North Pole
- b) The angle between true north and the course line
- c) The angle between magnetic north and the course line
- d) The direction from an arbitrary point on Earth to the magnetic north pole

36. On what frequency shall a blind transmission be made?

- a) On a tower frequency
- b) On a radar frequency of the lower airspace
- c) On the appropriate FIS frequency
- d) On the current frequency

37. The shortest distance between two points on Earth is represented by a part of...

- a) A small circle
- b) A great circle
- c) A rhumb line
- d) A parallel of latitude

38. The hull fabric of a hot-air balloon undergoes the most continuous thermal stress in which area?

- a) In the apron area
- b) In the lower third
- c) At the equator
- d) At the top area

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39. Why should a liquid gas bottle only be filled to 80% of its volume?

- a) Because temperature would get too high
- b) Because it would get too heavy otherwise
- c) To provide space for temperature-induced expansion
- d) To provide space for expansion in case of external cooling

40. The ratio between air pressures at different heights is referred to as:

- a) Pressure number
- b) Height value
- c) Height ratio
- d) Height number

41. What is meant by "inversion layer"?

- a) An atmospheric layer where temperature increases with increasing height
- b) A boundary area between two other layers within the atmosphere
- c) An atmospheric layer with constant temperature with increasing height
- d) An atmospheric layer where temperature decreases with increasing height

42. In what cases is visibility transmitted in kilometers?

- a) Up to 5 km
- b) Greater than 5 km
- c) Up to 10 km
- d) Greater than 10 km

43. What kind of information should be included in an urgency message?

- a) Nature of problem or observation, important information for support, departure aerodrome, information about position, heading and altitude
- b) Intended routing, important information for support, intentions of the pilot, departure aerodrome, destination aerodrome, heading and altitude
- c) Intended routing, important information for support, intentions of the pilot, information about position, departure aerodrome, heading and altitude
- d) Nature of problem or observation, important information for support, intentions of the pilot, information about position, heading and altitude

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44. At equilibrium the inner overpressure of a free balloon is highest at:

- a) At the lower opening
- b) The upper pole
- c) At the center of the hull
- d) At the equator

45. Information about operational limits, loading and performance about an aircraft can be taken from which document?

- a) Airworthiness certificate
- b) Operating handbook
- c) Certificate of registration
- d) Flight Log book

46. During a flight, a flight plan can be filed at the...

- a) Search and Rescue Service (SAR)
- b) Next airport operator en-route
- c) Flight Information Service (FIS)
- d) Aeronautical Information Service (AIS)

47. How can you obtain meteorological information concerning airports during a cross-country flight?

- a) AIRMET
- b) VOLMET
- c) METAR
- d) GAMET

48. What is the percentage of nitrogen in the atmosphere?

- a) 0.1 %
- b) 21 %
- c) 78 %
- d) 1 %

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49. What information is provided in the general part (GEN) of the AIP?

- a) Warnings for aviation, ATS airspaces and routes, restricted and dangerous airspaces
- b) Map icons, list of radio nav aids, time for sunrise and sunset, airport fees, air traffic control fees
- c) Table of content, classification of airfields with corresponding maps, approach charts, taxi charts, restricted and dangerous airspaces
- d) Access restrictions for airfields, passenger controls, requirements for pilots, license samples and validity periods

50. A distance of 7.5 cm on an aeronautical chart represents a distance of 60.745 NM in reality. What is the chart scale?

- a) 1 : 500000
- b) 1 : 1500000
- c) 1 : 1000000
- d) 1 : 150000

51. The hull load of a hot-air balloon is carried by ...

- a) By the towing ropes
- b) By the top ropes
- c) The carrying ropes
- d) The fixing ropes

52. The vertical extent of air with pressure changing by 1% with 80 m difference in height is referred to as ...

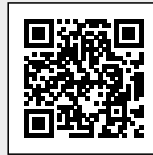
- a) Inhomogeneous
- b) Homogeneous
- c) Unstable
- d) Stable

53. What has to be considered before a balloon ride across water surfaces?

- a) Continuous radio communication has to be established with air traffic control
- b) A transponder has to be installed and carried aboard
- c) A flight plan with detailed routing has to be filed
- d) For all people inside the basket life jackets have to be carried aboard

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54. Which type of cloud is associated with prolonged rain?

- a) Light and heavy precipitation
- b) Rain and showers of rain
- c) Showers of snow and rain
- d) Prolonged rain and continuous rain

55. What is the purpose of the sounding pipe valve?

- a) It allows pressure equalization during cruise at high altitude
- b) To indicate the volumetric filling limit
- c) It prevents air from entering the burner system
- d) For venting the liquid gas container bottle

56. At time of take-off, ground wind speed is 2 m/s. Along take-off flight path, at a distance of 320 m obstacles erect up to 30 m. What is the minimum rate of climb to keep a clearance of 50 m above the obstacles? (Consider double the ground wind speed for the flight path)

- a) 1 m/s
- b) 1.5 m/s
- c) 2 m/s
- d) 0.5 m/s

57. What phenomenon is caused by cold air downdrafts with precipitation from a fully developed thunderstorm cloud?

- a) Freezing rain
- b) Gust front
- c) Electrical discharge
- d) Anvil-head top of Cb cloud

58. What is the correct way to transmit the call sign OE-JVK?

- a) Omega Echo Juliett Victor Kilogramm
- b) Omega Echo Jankee Victor Kilo
- c) Oscar Echo Juliett Victor Kilo
- d) Oscar Echo Jankee Victor Kilogramm

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59. What is the meaning of the abbreviation "ARC"?

- a) Airspace Restriction Criteria
- b) Airworthiness Recurring Control
- c) Airworthiness Review Certificate
- d) Airspace Rulemaking Committee

60. The rotational axis of the Earth runs through the...

- a) Geographic North Pole and on the geographic South Pole
- b) Magnetic north pole and on the magnetic south pole
- c) Geographic North Pole and on the magnetic south pole
- d) Magnetic north pole and on the geographic South Pole

61. What is a latent error?

- a) An error which has an immediate effect on the controls
- b) An error which is made by the pilot actively and consciously
- c) An error which remains undetected in the system for a long time
- d) An error which only has consequences after landing

62. What is the purpose of "interception lines" in visual navigation?

- a) They are used as easily recognizable guidance upon a possible loss of orientation
- b) To visualize the range limitation from the departure aerodrome
- c) They help to continue the flight when flight visibility drops below VFR minima
- d) To mark the next available en-route airport during the flight

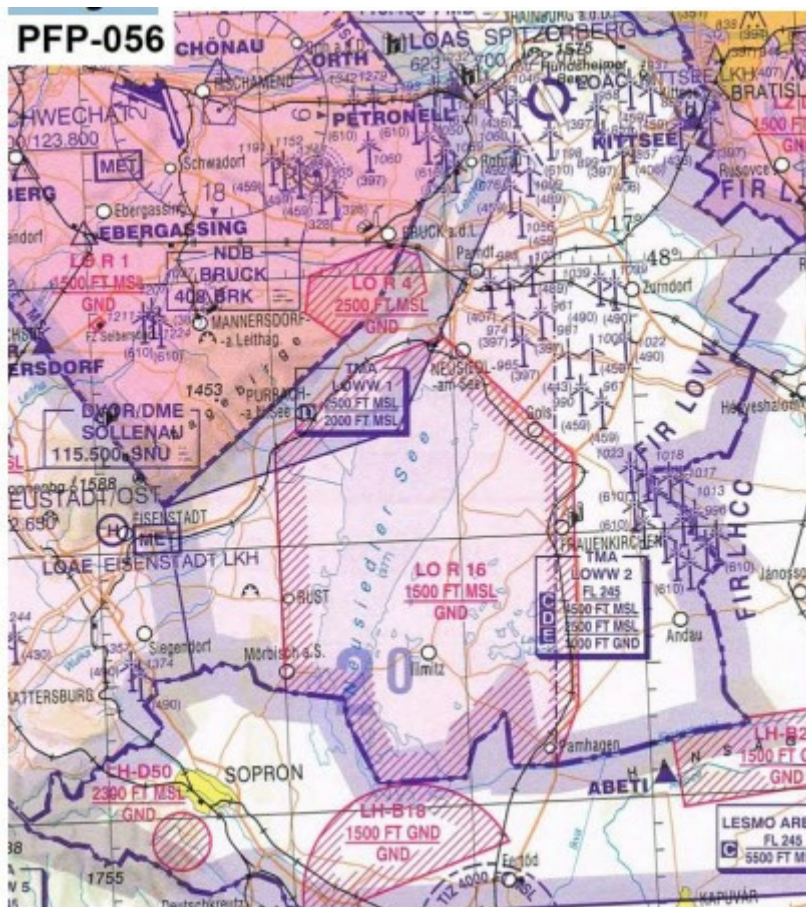
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63. The upper limit of LO R 16 equals... See annex (PFP-056)



- a) FL150
- b) 1500 ft GND
- c) 1500 ft MSL
- d) 1500 m MSL

64. What difference will be experienced during take-off in presence of a strong surface inversion, compared to a take-off with decreasing temperature with height?

- a) During climb through an inversion, less ballast must be released and/or less heating is required
- b) During climb through an inversion, less ballast must be released and/or more heating is required
- c) During climb through an inversion, more ballast must be released and/or more heating is required
- d) During climb through an inversion, more ballast must be released and/or less heating is required

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65. An aircraft travels 100 km in 56 minutes. The ground speed (GS) equals...

- a) 93 kt
- b) 198 kt
- c) 107 km/h
- d) 58 km/h

66. The altimeter's reference scale is set to airfield pressure (QFE). What indication is shown during the flight?

- a) Pressure altitude
- b) Altitude above MSL
- c) Airfield elevation
- d) Height above airfield

67. An altitude of 4500 ft is transmitted as...

- a) Four five zero zero
- b) Four thousand five zero zero
- c) Four five thousand
- d) Four thousand five hundred

68. What wind conditions should be expected in the vicinity of showers or thunderstorms?

- a) Steady wind from direction of shower
- b) Steady wind into direction of shower
- c) Strong gust from variable directions
- d) Calm winds during passage of a shower

69. A pilot license issued in accordance with ICAO Annex 1 is valid in...

- a) The country where the license was acquired
- b) All ICAO countries
- c) The country where the license was issued
- d) Those countries that have accepted this license on application

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70. Distress messages are messages...

- a) Sent by a pilot or an aircraft operating agency which have an imminent meaning for aircraft in flight
- b) Concerning aircraft and their passengers which face a grave and imminent threat and require immediate assistance
- c) Concerning the safety of an aircraft, a watercraft or some other vehicle or person in sight
- d) Concerning the operation or maintenance of facilities which are important for the safety and regularity of flight operations

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Response Scheme

Compare your answers with the following diagram and mark your score!

01: C	02: D	03: A	04: C
05: A	06: D	07: C	08: A
09: B	10: A	11: B	12: B
13: A	14: B	15: B	16: B
17: D	18: D	19: A	20: A
21: A	22: B	23: B	24: C
25: B	26: D	27: D	28: A
29: B	30: C	31: D	32: D
33: B	34: A	35: B	36: D
37: B	38: D	39: C	40: D
41: A	42: B	43: D	44: B
45: B	46: C	47: B	48: C
49: B	50: B	51: C	52: B
53: D	54: B	55: B	56: A
57: B	58: C	59: C	60: A
61: C	62: A	63: C	64: C
65: C	66: D	67: D	68: C
69: B	70: B		

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Response form

Use this form to mark your answers

01: _____	02: _____	03: _____	04: _____
05: _____	06: _____	07: _____	08: _____
09: _____	10: _____	11: _____	12: _____
13: _____	14: _____	15: _____	16: _____
17: _____	18: _____	19: _____	20: _____
21: _____	22: _____	23: _____	24: _____
25: _____	26: _____	27: _____	28: _____
29: _____	30: _____	31: _____	32: _____
33: _____	34: _____	35: _____	36: _____
37: _____	38: _____	39: _____	40: _____
41: _____	42: _____	43: _____	44: _____
45: _____	46: _____	47: _____	48: _____
49: _____	50: _____	51: _____	52: _____
53: _____	54: _____	55: _____	56: _____
57: _____	58: _____	59: _____	60: _____
61: _____	62: _____	63: _____	64: _____
65: _____	66: _____	67: _____	68: _____
69: _____	70: _____		