are hot, compact stars whose mass is comparable to the Sun's and size to the Earth's.

A. White dwarfs
B. Neutron stars
C. Pulsars
D. Black holes
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Which of the following objects do you expect to find at the center of a planetary nebula?

- A. Planet
- B. Neutron star
- C. White dwarf
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A ___________ happens when a single high mass star explodes.

A. Nova
B. Type Ia supernova
C. Type II supernova
D. Pulsar
E. None of the above
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A ___________ happens when a white dwarf in a binary system accumulates more mass than Chandrasekhar limit.

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This event recurs and happens when one of the companions in the binary system is a white dwarf.

A. Nova
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D. Pulsar
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This event recurs and happens when one of the companions in the binary system is a white dwarf.

A. Nova
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D. Pulsar
E. None of the above
_________ are hot, compact remnant stars whose mass is typically between one and several times that of the Sun, but their size is only 10 km or less.

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C. Pulsars

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This recurring event happens in the case of a binary system in which one of the companions is a neutron star.

A. Novae
B. Type I supernovae
C. Type II supernovae
D. X-ray bursts
E. None of the above
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A. Novae
B. Type I supernovae
C. Type II supernovae
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Which of the following is a remnant of a dying star?

- A. White dwarf
- B. Neutron star
- C. Black hole
- D. All of the above
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If stars rotate with periods of tens of days, why does a neutron star rotate several to thousands of times a second?

A. When a neutron star collapses, the intensified magnetic field causes it to rotate much more quickly.

B. When a neutron star collapses, its rotation is kicked up by the ejected material from the supernova.

C. When a neutron star collapses, its rotation rate speeds up because of conservation of angular momentum.

D. The collapsing neutron star becomes hot and the fast rotation is the result of thermal energy.
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D. The collapsing neutron star becomes hot and the fast rotation is the result of thermal energy.
Two important properties of young pulsars are
A. Rapid rotation and no magnetic field.
B. No rotation and strong magnetic field.
C. Extremely rapid rotation and a weak magnetic field.
D. Extremely rapid rotation and a strong magnetic field.
E. No rotation and no magnetic field.
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C. Extremely rapid rotation and a weak magnetic field.
D. Extremely rapid rotation and a strong magnetic field.
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A method for identifying a black hole is to
A. Observe them directly through the space-based telescopes.
B. Look for voids (holes) in the star fields.
C. Look for its effect on nearby companions.
D. Search for radio waves from the accretion disk.
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B. Look for voids (holes) in the star fields.  
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The escape velocity inside a black hole is

A. Zero.
B. Infinity.
C. Unknown.
D. Half the speed of light.
E. Greater than the speed of light.
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C. Unknown.
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What is the escape velocity at the event horizon of a black hole?

A. Speed of sound.
B. Supersonic speed.
C. Speed of light.
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B. Supersonic speed.
C. Speed of light.
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Which of the following can actually escape a black hole?

A. Electrons.
B. Very high energy gamma-rays.
C. Visible light.
D. Very low energy radio waves.
E. None of the above.
The Chandrasekhar limit is the largest ______ a white dwarf can have.

A. Speed
B. Mass
C. Temperature
D. Wavelength
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_______ are remnants of low mass stars.

A. Neutron stars  
B. Pulsars  
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D. Black holes
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B. Pulsars  
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The mass of a black hole can be determined by ______.

A. Measuring its volume and density
B. the electromagnetic radiation it emits
C. how rapidly it is spinning
D. Applying the modified version of Kepler's 3rd law, if the black hole is in a binary system
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The temperature of black holes is estimated to be _____.

A. Hotter than the Sun
B. Less than 1 millionth of a degree
C. Hotter than 1 million degrees
D. Hotter than a white dwarf
E. Black holes do not have temperature
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Millisecond pulsars rotate about ______ times per second.

A. 10  
B. 100  
C. 1000  
D. 1 million
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A. 10
B. 100
C. 1000
D. 1 million
In comparison to main sequence stars, which of the neutron star properties listed is not considered extreme?

A. Magnetic field
B. Spin rate
C. Density
D. Mass
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Black holes emit radiation in the form of _______ waves known as Hawking radiation.

A. gravitational  
B. Electromagnetic  
C. seismic  
D. nuclear
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The first pulsars were observed using ________ telescopes.

A. Optical
B. X-ray
C. Infrared
D. Radio
E. Gamma ray
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The fast rotation of neutron stars is a consequence of _____.

A. Wien's law
B. The Doppler effect
C. Their high temperature
D. The law of conservation of angular momentum
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A. Wien's law
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Type Ia supernovas involve a _____.

A. White dwarf
B. Neutron star
C. Black hole
D. Planetary nebula
Type Ia supernovas involve a _____.

A. White dwarf
B. Neutron star
C. Black hole
D. Planetary nebula
Compared to the Sun, white dwarfs have higher _____ and lower _____.

A. Masses; surface temperatures  
B. Volumes; surface temperatures  
C. Surface temperatures; luminosities  
D. Luminosities; surface temperatures
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A. Masses; surface temperatures
B. Volumes; surface temperatures
C. Surface temperatures; luminosities
D. Luminosities; surface temperatures
White dwarfs have a surface composed of a thin layer of ____.

A. Hydrogen and oxygen
B. Hydrogen and helium
C. Carbon and oxygen
D. Carbon and helium
White dwarfs have a surface composed of a thin layer of ____.

A. Hydrogen and oxygen
B. Hydrogen and helium
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Astronomers use _____ to determine the magnetic field of white dwarfs.

A. The Doppler effect
B. Wien's law
C. Conservation of angular momentum
D. The Zeeman splitting of spectral lines
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Why do white dwarfs have high temperatures?

A. Heat left over from their formation.
B. Chemical reactions on their surfaces.
C. Nuclear fusion in their cores.
D. Frictional heating from motions inside the white dwarfs.
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Gravitational waves

A. Are how pulsars pulse.
B. Carry material into black holes.
C. Are traveling distortions of space and time.
D. Do not carry energy.
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A. Are how pulsars pulse.
B. Carry material into black holes.
C. Are traveling distortions of space and time.
D. Do not carry energy.
If left in isolation a white dwarf will eventually

A. Cool off and become a black dwarf.
B. Explode as a Type Ia supernova.
C. Form a brown dwarf.
D. Become the seed for a new star.
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An isolated black hole will

A. Eventually suck in all of the Universe.
B. Implode due to its own gravity.
C. Not change in any way.
D. Slowly evaporate away through the emission of Hawking radiation.
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A. Eventually suck in all of the Universe.
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http://space-facts.com/black-holes/
http://www.space.com/23756-white-dwarf-stars.html
http://www.space.com/22180-neutron-stars.html
http://www.astronomynotes.com/evolutn/s10.htm