




Name _____ Class _____ Date _____

1 One of the basic laws of physics behind rocket science is **Newton's third law of motion**, which states that _____.

- A every explosion causes forward motion
- B to escape the pull of gravity, an object must be aerodynamic
- C for every action there is an equal and opposite reaction
- D fire, when hot enough, pushes away from itself




2 Rocket fuel is burned inside the rocket in a **combustion chamber**. The force that is exerted out of the rocket's exhaust nozzle equals the force of the gas pushing at the **top** of the combustion chamber.

This force, which ultimately moves the rocket, is called _____.

- A pressure
- B thrust
- C combustion
- D gravity

3 In order for a rocket to leave the **launch pad**, the **thrust** must _____.

- A begin immediately
- B start slowly and increase rapidly
- C exceed the force



4 The **speed** and direction a rocket needs to completely escape earth's **gravitational pull** is called _____.

- A thrust
- B orbital velocity
- C escape velocity



5



PREVIEW


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- A a lunar module
- B a satellite
- C a space probe
- D a space shuttle




- A it is very similar to Earth
- B it may have supported life in the past
- C it may support some simple form of life presently
- D all of the above



9 The Pioneer, Voyager, and Galileo missions were **unique** because the **purpose** of these space probes was to study _____.

- A Venus and the Sun
- B asteroids and Mars
- C the outer portions of the solar system
- D the effects of weightlessness on scientific experiments



10 **Stardust** was the first space probe designed to study _____.

- A Jupiter
- B Venus
- C the asteroid belt
- D a comet





ANSWER KEY

One of the basic laws of physics behind rocket science is **Newton's third law of motion**, which states that _____.

- A every explosion causes forward motion
- B to escape the pull of gravity, an object must be aerodynamic
- C for every action there is an equal and opposite reaction
- D fire, when hot enough, pushes away from itself



(C)

Rocket fuel is burned inside the rocket in a **combustion chamber**. The force that is exerted out of the rocket's exhaust nozzle equals the force of the gas pushing at the **top** of the combustion chamber.

This force, which ultimately moves the rocket, is called _____.

- A pressure
- B thrust
- C combustion
- D gravity

(b)

In order for a rocket to leave the **launch pad**, the **thrust** must _____.

- A begin immediately
- B start slowly and increase rapidly
- C exceed the force of gravity
- D start forcefully but



(C)

The **speed** and direction a rocket needs to completely escape earth's **gravitational pull** is called _____.

- A thrust
- B orbital velocity
- C escape velocity
- D retro velocity



(C)



PREVIEW

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- C a space probe
- D a space shuttle



- B it may have supported life in the past
- C it may support some simple form of life presently
- D all of the above



The Pioneer, Voyager, and Galileo missions were **unique** because the **purpose** of these space probes was to study _____.

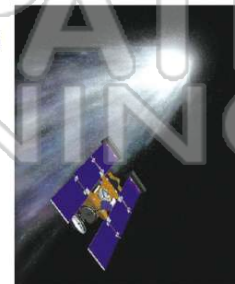
- A Venus and the Sun
- B asteroids and Mars
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(C)

Stardust was the first space probe designed to study _____.

- A Jupiter
- B Venus
- C the asteroid belt
- D a comet



(d)