

# September 24, 2014

- 31** In guinea pigs, black fur (B) is dominant to white fur (b). A Punnett square of a cross between a black-furred and a white-furred guinea pig is shown below.

	B	b
b		
b		

What can be determined from this Punnett square?

- A There is a 100% chance that these guinea pigs will have live offspring.
- B There is a 100% chance that these guinea pigs will have four offspring.
- C There is a 50% chance that the offspring will have gray fur.
- D There is a 50% chance that the offspring will have black fur.

You must explain why your answer is correct.

Please write the page number in your book that supports your explanation.

Use the index of your book to help you.

# Chapter 14 Day 11 (Review)

Objective:

Distinguish between the six simple machines.

# Agenda

- Go over chapter review.
- Play Jeopardy. (if time)

# Chapter Review Answers

1. Efficiency
2. Input Force
3. Output Force
4. Wheel and Axle
5. Mechanical Advantage
6. Simple Machine
7. Wedge
8. Lever
9. Incline Plane
10. Power

# Chapter Review Answers

11. C

12. D

13. B

14. A

15. B

16. C

17. B

18. B

19. B

# Chapter Review Answers

20. No, it would need to be at least 3m from the fulcrum.

21. When work is done on the machine, energy is transferred to the machine. When work is done by the machine, the machine transfers energy to another object. According to the law of conservation of energy, energy cannot be created or destroyed. Therefore, the machine cannot create energy, so the energy transferred from the machine cannot be greater than the energy transferred to the machine.

# Chapter Review Answers

22. The radius of the knob is greater than the radius of the axle. This means that when a force is applied to the knob, the knob moves a greater distance than the axle. The knob and the axle do the same amount of work. Therefore, the axle must multiply the work.
23. The mechanical advantage of an inclined plane would be the same on Earth as on the Moon. The mechanical advantage of an inclined plane depends on its length and height.

# Study Guide Answers

24. Graph

25. work = force in direction of motion x  
distance moved by this force = 40 N x 10 m =  
400 J

26. Skip

27. Skip



# Study Guide Answers

28.  $MA = 6/2 = 3$

29. 550N

30. 83 percent

31. Machine A has the largest mechanical advantage.