



**2008 Senior State 4-H Horse Bowl  
Round Ten**

5. C1 Q. If a pair of alleles is identical what is that individual considered to be with respect to those genes?
- A. Homozygous
- S. YLM 335-1, HIH 1020-2 550/4
6. C2 Q. What is a horse doing when it is engaging in coprophagia?
- A. Eating feces
- S. Lewis 375, DET 68 930/3
7. C3 Q. What term is used to indicate that a horse may have a structural problem or deviation which has only a limited effect on the horse's ability to perform?
- A. Serviceably sound
- S. HIH 230-1 600/4
8. C4 Q. Give one other term that can be used to describe the condition of Exercise Induced Pulmonary Hemorrhage (EIPH) which is the presence of blood in the respiratory tract of the horse.
- A. Bleeders (do not accept epistaxis – is a term for nose bleed)
- S. YLM 325-2, HIH 810-2 850/4

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9. C1 Q. Why is it important that you know where the transverse facial artery and facial artery run on your horses head?
- A. These are two important sites for taking your horses pulse
- S. Kainer plate 62 440/3
10. C2 Q. This is the largest and most common group of toxins affecting horses, occurring in both harvested and unharvested feeds.
- A. Mycotoxins
- S. Lewis 346 770/4
11. C3 Q. The term diaphysis refers to what part of a long bone?
- A. The shaft of the bone
- S. Kainer plate 9, DET 80 410/4
12. C4 Q. In response to GnRH release from the hypothalamus what structure releases FSH and LH?
- A. Pituitary gland
- S. HIH 910-6 510/3

**End One-On-One**

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**Begin Open Questions**

13. Q. What breed of horse is known for its distinctive gait, in which the horse performs a brisk walk with the front legs and trots with the back legs and originated in the Ozark Mountains of Missouri and Arkansas?
- A. Missouri Foxtrotter (also accept Fox Trotting Horse – Evans)
- S. DET 181, Evans 41-42 200/4
14. Q. What is the horse racing term for a type of wagering where the person placing the bet must pick the win and place finishers in a race in exact order?
- A. Exacta
- S. DET 100 1040/4
15. Q. If a horse is afraid of something and is unable to run away from the source of fear, it is left with a choice of fighting or submission. What can you do to encourage submission to things that may happen repetitively such as the use of a twitch?
- A. Make the event end with a pleasurable, positive, or non-fearful experience
- S. Lewis 376 930/5
16. Q. The two color genes – lethal white and dominant lethal roan – cause early embryonic death in fetuses when found in what pairing of alleles?
- A. Homozygous
- S. Evans 511-3 550/4

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**Toss Up – Bonus Attached**

17. Two Part Q. The “Plantation Gait” was a smooth ground covering gait that made the Tennessee Walking Horse popular in the south. What is the proper name for the gait and how many beats is it?
- A. The running walk  
4 beats
- S. Evans 178 640/3

**Bonus Question**

18. Q. Correctly identify the four teams of horses in an eight-horse hitch in order from the lead team back.
- A. Leaders, point (body) team, swing team, and wheelers
- S. DET 166, 215, 261, 292 1050/4

**Resume Open Questions**

19. Q. What is the name of the iron-containing protein found in erythrocytes that binds to oxygen?
- A. Hemoglobin
- S. HIH 830-1 440/3
20. Q. What is the proper term for filters found in the horse’s body that can remove bacteria, cancer cells and foreign material from circulation and are connected to the vascular system by the thoracic duct?
- A. Lymph nodes
- S. Kainer plate 64, Evans 112, DET 173 440/5

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21. Q. The amount of energy used in muscle contraction is a function of how fast it is contracting. What is the energy unit used to drive this at the muscle fiber level?
- A. ATP (Adenosine triphosphate)
- S. HIH 840-2 410/5
22. Q. Identify this breed from the following description. This breed will have a mature weight of 1,400 to 1,800 pounds for females and 1,800 to 2,000 pounds for males. They average 15.1 to 16.3 hands at maturity. As a breed their numbers are small and they trace their foundation to a mare from Iowa. They hold the distinction of being the draft breed that was developed in the United States. They are all cream in color.
- A. American Cream
- S. HIH 163-1 200/5
23. Q. What event triggers the end of the estrus or heat cycle usually within 24 hours?
- A. Ovulation
- S. Lewis 235, Evans 323, HIH 930-1 510/3

**Toss Up – Bonus Attached**

24. Q. Two part question. Hay baled at a moisture level of 17-20% is ideal. Give one reason why moisture content above and one reason why moisture content below this amount would potentially reduce the quality of baled hay.
- A. Below this level the hay is dry and will lose leaves during baling and storage – this decreases nutritional value and palatability. Above this moisture level the potential for mold production increases (also increased heat is produced which decreases protein levels)
- S. YLM 337-2L, Lewis 69 700/4

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### Bonus Question

25. Q. Name three ways the term “points” can be used in relation to horses and the horse industry?
- A. Sharp edges on the cheek teeth  
Coloring of the mane, tail and legs  
Values for winning or placing at approved shows  
On an English saddle the part of the pommel arch that extends below the stirrup bar  
On a western saddle the lower part of the tapadera  
Team in the back of the leaders in an eight horse hitch  
Type of race – point-to-point  
“Pointing” – perceptible extension of the stride with little flexion  
Standing position when one of the front legs is extended ahead of the other (sore foot is put in front to take the weight off of it)
- S. DET 215, Kainer plate 48, HIH 1100/2      1070/4

### Resume Open Questions

26. Q. What conformation defect is predisposed to a carpal chip, especially in young racehorses?
- A. Calf knees
- S. Kainer plate 11      620/4
27. Q. What specific type of insurance would you need to purchase in order to insure your horse against death from sickness, injuries, disease or old age?
- A. Full mortality or all risks mortality insurance (do not accept only mortality insurance – does not cover the specified items. Specified insurance would also not be correct as it covers only one specific event)
- S. HIH 1340-1      940/5

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28. Q. How does the spleen help the race horse increase its level of arterial oxygen and maintain levels of physical exertion?
- A. The spleen contracts releasing additional red blood cells to carry oxygen
- S. HIH 830-2, Evans 114 440/4
29. Q. Your horse is experiencing recurrent mild colic. Your veterinarian is auscultating the right side of your horse's abdomen for borborygmus. What specific part of the digestive tract is he listening to?
- A. Cecum
- S. HIH 710-2, DET 35 430/5

**Last Question of the Round**

30. Q. What is the purpose of a half breed on a Decker saddle?
- A. Provides extra padding, holds the pack away from the horse's side
- S. HIH 1125-1 1020/3