

**2025 TJSSA State Futurity
Genetic Evaluation Quiz
Senior and Collegiate Divisions**

You have 60 minutes to complete this quiz. Questions 31 through 35 are tiebreaker questions. Further ties will be broken by order of finish.
For each question, choose the best answer.

1. What word has been federally trademarked by the American Simmental Association as a title for the popular Simmental x Angus composite cattle?
 - a. SimSolutions™
 - b. SimAngus™
 - c. SimGenetics™
 - d. SimSource™

2. The sires used in the three most recent generations contribute _____ of the genetic makeup of a calf.
 - a. 62.5%
 - b. 75.0%
 - c. 87.5%
 - d. 92.5%

3. *Refer to the image to the right.*
Cards like these are used to submit what type of DNA sample?
 - a. Saliva
 - b. Follicles (tail hair)
 - c. Blood
 - d. Tissue

4. Ratios are most useful for comparing which of the following?
 - a. Individual animals within a contemporary group
 - b. Individual animals within a breed population
 - c. Sire groups within a contemporary group
 - d. Sire groups within a breed population

5. Which of the following trait pairs has a negative genetic correlation?
 - a. Marbling and Ribeye Area
 - b. Birth Weight and Weaning Weight
 - c. Calving Ease and Stayability
 - d. Milk Production and Calving Interval

6. In what year was the Texas Simmental Association founded?
Note: It was renamed Texas Simmental/Simbrah Association fifteen years later.
 - a. 1965
 - b. 1970
 - c. 1975
 - d. 1980

7. Cow 308 and Cow 340 are both first-calf heifers. Cow 308's BW EPD has an accuracy of 0.44, and Cow 340's BW EPD has an accuracy of 0.28. What is the most likely explanation?
 - a. Cow 308 came from a larger contemporary group.
 - b. Cow 308 has multiple full siblings that have already produced calves.
 - c. Cow 308 was flushed and her ET calves have been registered.
 - d. Cow 308 has genomic enhanced EPDs.

8. In ASA's whole herd reporting program, what is the fall calving season?
 - a. July through December
 - b. August through December
 - c. September through December
 - d. October through December

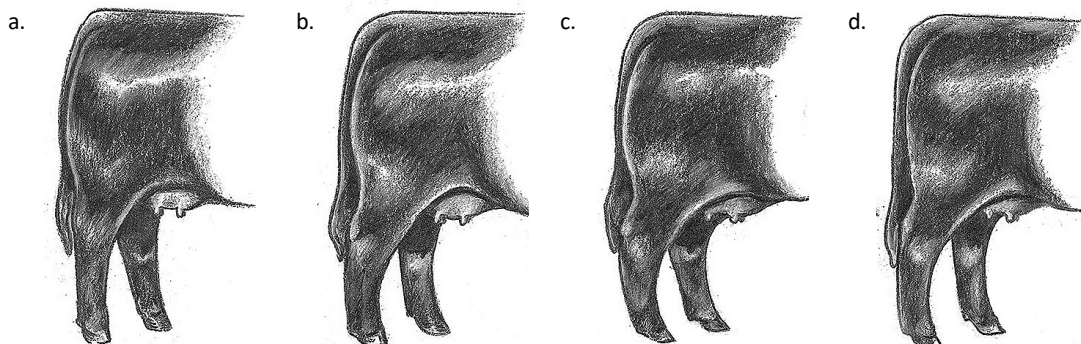
9. Which of the following statements about EPD accuracy is true?
 - a. As the accuracy of an EPD increases, the possible change of that EPD also increases.
 - b. EPDs with higher accuracy are less susceptible to significant change.
 - c. Accuracy predicts the variation within an animal's calf crop. Higher accuracies indicate less variation.
 - d. All of the above are true.



For questions 10 through 18, refer to the following sires. Information on these bulls can be found at the end of your quiz.
Each bull may be used as an answer more than once.

- A. CDI/BDV Security 399M
- B. KLER YFC Guardrail M44
- C. Mid-Am New Heights 425M
- D. W/C Heavy Hitter 733M

10. If these bulls all produced calves in the same contemporary group, which sire's calves would likely have the lowest BW ratios?
11. Which bull should you expect to sire offspring with the highest ultrasounded IMF percentages, on average?
12. Which bull should you expect to sire offspring with the largest average ribeye area at 475 days of age?
13. Which bull should you expect to produce offspring that are the most profitable in a feedlot setting?
14. Which bull should you expect to produce daughters that are least likely to experience dystocia as heifers?
15. The possible change of Bull A's YG EPD is ± 0.13 . What does this mean?
 - a. The likely true breeding value is within 0.13 points of its current value.
 - b. This EPD ranks in the Top 13% of all registered Purebred Simmental sires.
 - c. This EPD is 13% accurate.
 - d. This EPD has changed by 0.13 points since the animal was initially registered.
16. Based on their current EPDs, how many more pounds of adjusted weaning weight would you expect Bull D to produce per calf when compared to Bull B?
 - a. 8.6 lbs.
 - b. 17.0 lbs.
 - c. 24.5 lbs.
 - d. 38.6 lbs.
17. How many of these bulls are capable of producing heterozygous black offspring?
 - a. 1
 - b. 2
 - c. 3
 - d. 4
18. Which of the following statements is not true?
 - a. Between Bulls A and B, Bull A should produce calves with heavier adjusted yearling weights.
 - b. Between Bulls B and C, Bull B should produce calves with better post-weaning gain rates.
 - c. Between Bulls C and D, Bull C should produce daughters with more reproductive longevity.
 - d. Between Bulls D and A, Bull D should produce offspring with better disposition scores.
19. Bull K240 has a YW EPD that ranks in the 20th percentile. Bull L3077 has a YW EPD that ranks in the 50th percentile. Assuming both bulls are Purebred Simmentals, which one should you expect to produce heavier offspring at 365 days of age, on average?
 - a. Bull K240
 - b. Bull L3077
 - c. It depends upon the accuracies of their YW EPDs.
 - d. It depends upon the ages of the cows they are used on.
20. Rear Leg Side View is scored on a scale of 1 to 9, with a score of 5 considered ideal by breed associations and researchers. Which of these images displays a rear leg score of 5?



21. Which of the following statements about the horned/polled trait is true?
- It is a polygenic trait in which the horned allele is dominant to the polled allele.
 - It is a polygenic trait in which the polled allele is dominant to the horned allele.
 - It is a simple recessive trait in which the horned allele is dominant to the polled allele.
 - It is a simple recessive trait in which the polled allele is dominant to the horned allele.
22. In nearly every beef operation, what has the greatest impact on genetic progress?
- Embryo transfer
 - Genomic testing
 - Sire selection
 - Data reporting

ASA #: 2660685
Registered
SimAngus

KS MISS SEQUOIA Y770
Red
Polled (Homozygous Polled)

Tattoo: Y770
Left Ear

Single Birth Cow

3/4 SM 1/4 AR

PQS GE

TraitTrac
(Check available results)

Owner: 283038 - CTN SIMMENTALS
Breeder: 127519 - KENNER, ERIKA JO

Birth Date: 2011-04-11
Original Issue: 2012-11-23

BOLT_GENOMIC - 2025-04-08

	CE	BW	WW	YW	ADG	DMI	MCE	MILK	MWW	STAY	DOC	CW	YG	MARB	BF	REA	SF	\$GN	API	TI
EPD	7.9	4.2	74.3	106.4	0.2	0.83	5.2	30.2	67.3	15.9	13.8	17.5	-0.39	0.23	-0.057	0.88	-0.32	-0.036	112.8	71.2
PC	±3.4	±1.0	±6.2	±10.0	±0.01		±4.4	±7.0	±5.9	±4.5	±2.2	±9.7	±0.12	±0.12	±0.023	±0.21	±0.21			
ACC	0.57	0.66	0.62	0.61	0.61	0.35	0.44	0.41	0.51	0.36	0.56	0.50	0.41	0.52	0.43	0.50	0.17	0.38		
%	95	99	60	75	90	50	80	10	30	40	35	95	10	80	25	20		99	85	85

Pedigree

			Color	HPS
	HOOKS SHEAR FORCE 38K	CANSM - 684162	2081939	BH PP
	HOOKS/KS SEQUOIA 35S		2334113	R PP
	HOOKS NICOLE 15N		2214032	PP
	KS MISS SEQUOIA Y770		2660685	R PP
	REMINGTON RED LABEL HR	CANSM - 634702	2252968	R PP
	ASR MS SUPER BALDY U851		2445081	PP
	PWA MISS RED LOGAN M216	USAAR - 859334	2459310	PP

For questions 23 through 27, use the information above.

23. Which of the following statements about this cow's Parental Verification status is most accurate?
- She has been qualified through DNA to only her sire.
 - She has been qualified through DNA to only her dam.
 - She has been qualified through DNA to both her sire and dam.
 - She has not been qualified through DNA to either of her parents.
24. Which of this cow's EPDs is closest to breed average?
- DMI
 - REA
 - ADG
 - BW
25. This cow is registered as 3/4 Simmental. What makes up the remainder of her breed composition?
- Angus
 - Maine-Anjou
 - Limousin
 - Red Angus
26. Which of the following statements about this cow's BW EPD is true?
- We can be 67% confident that the true breeding value of this EPD lies between 3.7 and 4.7.
 - We can be 75% confident that the true breeding value of this EPD lies between 3.2 and 5.2.
 - We can be 95% confident that the true breeding value of this EPD lies between 2.2 and 6.2.
 - We can be 99% confident that the true breeding value of this EPD lies between 2.7 and 5.7.
27. If you were to flush this donor to a heterozygous black, homozygous polled bull, what percentage of the resulting calves would you expect to be red and homozygous polled?
- 37.5%
 - 50%
 - 62.5%
 - 75%

28. Producers under limited forage conditions would be wise to avoid selecting for high:
- BW EPDs
 - WW EPDs
 - Milk EPDs
 - REA EPDs
29. You have a herd of Simmental influenced cows. Your goal is to produce all black calves, as you think it will make them more marketable. What is the simplest way to achieve that goal?
- Test the color coat status of all of the cows and cull all of the red carriers.
 - Put embryos from black donor females into all of the cows that are red and/or have produced a red calf in the past.
 - Purchase a black herd bull that has a sire and dam that are also black.
 - Utilize only homozygous black sires.
30. Which of the following statements about comparing EPDs across breeds is true?
- EPDs are specific to each breed association and cannot be used to directly compare animals from different breeds.
 - Each breed association uses the same EPD averages, allowing animals to be directly compared using percentile ranks.
 - In order to compare EPDs across breeds, the animals must be registered with multiple breed associations.
 - Using an adjustment factor table published by BIF, EPD averages can be adjusted to zero for all breeds and then used to compare animals registered with different breed associations.

TIEBREAKER QUESTIONS

Questions 31 through 35 are tiebreaker questions only.

31. If a donor dam has one of two genetic defect statuses for certain defects within TraitTrac, she must be tested before her ET progeny can be registered. Which two statuses require testing?
- CL and PR
 - CL and TC
 - CL and AF
 - CL and TF
32. Refer to the bulls you used to answer questions 10 through 18. How many of these bulls have a dam that is homozygous black?
- 1
 - 2
 - 3
 - 4
33. With regards to donor females, what does the term *prolific* most often indicate?
- The donor has a high valuation based on sales of progeny and embryos.
 - The donor has an outcross pedigree and can be mated to a wide range of sires.
 - The donor has an elite EPD profile.
 - The donor has produced a high number of offspring via embryo transfer.
34. Within Contemporary Group 3, Heifer M436 has an adjusted weaning weight of 605 lbs. If the average ADJ WW for the contemporary group is 590 lbs., what is her WW ratio?
- 98
 - 103
 - 105
 - 115
35. Birth Weight, Weaning Weight and Calving Ease are examples of:
- Base EPDs
 - Direct EPDs
 - Growth EPDs
 - Performance EPDs

ASA #: 4432169
Registered
AMERICAN SIMMENTAL

CDI/BDV SECURITY 399M
Black (Homozygous Black)
Polled (Homozygous Polled)

Tattoo: 399M
Left Ear

Frozen Embryo Bull

PB SM

PQB GE

TraitTrac
(Check available results)

Owner: 028998 - BEGGERS DIAMOND V RCH INC
Breeder: 202710 - C DIAMOND INC

Birth Date: 2024-04-01
Original Issue: 2025-03-11

BOLT_GENOMIC - 2025-04-08

	CE	BW	WW	YW	ADG	DMI	MCE	MILK	MWW	STAY	DOC	CW	YG	MARB	BF	REA	SF	\$GN	API	TI
EPD	8.1	0.6	92.3	143.3	0.32	1.14	4.2	28.2	74.3	16.4	7.8	26.2	-0.24	0.61	-0.045	0.63	-0.34	0.044	161.5	100.1
PC	±4.5	±1.6	±9.1	±14.4	±0.02		±6.1	±9.8	±8.8	±4.8	±2.9	±11.4	±0.13	±0.16	±0.026	±0.26	±0.24			
ACC	0.42	0.46	0.44	0.44	0.44	0.33	0.23	0.18	0.27	0.33	0.43	0.41	0.33	0.40	0.34	0.39	0.02	0.37		
%	90	40	15	10	15	90	80	15	10	45	90	60	95	10	90	90		50	15	5

- Pedigree +

Color HPS

	HHS MR ENTOURAGE 867B	2941225	BB	PP
	LCDR RETRO 14K	4113752	BB	PP
	WS MISS SUGAR C4	2974794	BB	PP
	CDI/BDV SECURITY 399M	4432169	BB	PP
	CDI JOURNEY 224Y	2641407	B	PP
	CDI MS JOURNEY 73B	2853079	BB	PP
	CDI MS SHARPER IMAGE 22Z	2797786	BB	P

ASA #: 4381421
Registered
AMERICAN SIMMENTAL

KLER YFC GUARDRAIL M44
Black (Homozygous Black)
Polled (Homozygous Polled)

Tattoo: M44
Left Ear

Single Birth Bull

PB SM

PQB GE

TraitTrac
(Check available results)

Owner: 222422 - K-LER CATTLE CO
Breeder: 222422 - K-LER CATTLE CO

Birth Date: 2024-01-14
Original Issue: 2025-02-24

BOLT_GENOMIC - 2025-04-08

	CE	BW	WW	YW	ADG	DMI	MCE	MILK	MWW	STAY	DOC	CW	YG	MARB	BF	REA	SF	\$GN	API	TI
EPD	14.7	-1.2	71.5	106.4	0.22	0.39	7.6	22.7	58.3	16.8	12.5	16.0	-0.44	0.18	-0.085	0.79	0.034	142.3	80.0	
PC	±4.4	±1.5	±8.8	±13.6	±0.01		±6.2	±10.0	±9.0	±4.9	±2.9	±11.6	±0.14	±0.16	±0.026	±0.27				
ACC	0.44	0.49	0.46	0.47	0.47	0.31	0.22	0.16	0.26	0.31	0.42	0.40	0.32	0.38	0.34	0.37	0.34			
%	15	15	80	75	70	25	25	55	70	40	45	90	25	55	30	65	65	40	55	

- Pedigree +

Color HPS

	LLSF VANTAGE POINT F398	3492381	BH	PP
	CLRWTR CLEAR ADVANTAGE H4G	3858588	BB	PP
	WS MISS SUGAR C4	2974794	BB	PP
	KLER YFC GUARDRAIL M44	4381421	BB	PP
	WS REVIVAL	2913874	BB	PP
	KLER BARBIES STAR 972G	3582381	BB	PP
	K-LER BARBIE 455B	2953254	BB	PP

ASA #: 4403206
Registered
AMERICAN SIMMENTAL

MID-AM NEW HEIGHTS 425M
Black (Homozygous Black)
Polled (Homozygous Polled)

Tattoo: 425M
Left Ear

Single Birth Bull

PB SM

PQB GE

TraitTrac
(Check available results)

Owner: 230280 - SCHNABEL RANCH
Breeder: 268457 - MID-AM GENETICS

Birth Date: 2024-01-01
Original Issue: 2025-03-04

BOLT_GENOMIC - 2025-04-08

	CE	BW	WW	YW	ADG	DMI	MCE	MILK	MWW	STAY	DOC	CW	YG	MARB	BF	REA	SF	\$GN	API	TI
EPD	14.0	-2.1	92.7	138.2	0.28	0.76	4.2	26.7	73.0	19.9	14.6	29.7	-0.26	0.26	-0.012	0.98	-0.36	0.084	160.8	95.2
PC	±4.2	±1.5	±8.6	±13.4	±0.01		±5.7	±9.0	±8.2	±4.5	±2.8	±11.0	±0.15	±0.15	±0.025	±0.25	±0.23			
ACC	0.46	0.49	0.47	0.48	0.48	0.33	0.28	0.24	0.32	0.37	0.45	0.43	0.35	0.42	0.38	0.41	0.07	0.39		
%	20	10	15	15	30	60	80	25	10	10	20	50	90	40	99	25		15	15	15

- Pedigree +

Color HPS

	HOOK'S BLACK HAWK 50B	2854467	BB	PP
	HOOK'S EAGLE 6E	3253742	BB	PP
	HOOK'S CRYSTAL 1C	3013438	BB	PP
	MID-AM NEW HEIGHTS 425M	4403206	BB	PP
	W/C EXECUTIVE ORDER 8543B	2900283	BH	PP
	MID-AM RESTLESS HEART	3452823	BB	PP
	SFI/GPAR LUVS TO DREAM	2764987	BH	PP

ASA #: 4442162
 Registered
 AMERICAN SIMMENTAL

W/C HEAVY HITTER 733M
 Black (Heterozygous Black)
 Polled (Homozygous Polled)

Tattoo: 733M
 Left Ear

Frozen Embryo Bull

PB SM

PQB GE

TraitTrac
 (Check available results)

Owner: 003773 - WERNING, DALE
Breeder: 003773 - WERNING, DALE

Birth Date: 2024-01-12
Original Issue: 2024-12-30

BOLT_GENOMIC - 2025-04-08

	CE	BW	WW	YW	ADG	DMI	MCE	MILK	MWW	STAY	DOC	CW	YG	MARB	BF	REA	SF	\$GN	API	TI
EPD	13.3	-0.9	96.0	145.0	0.31	1.06	6.8	27.4	75.3	14.2	18.0	41.0	-0.45	0.07	-0.067	1.29	-0.36	0.054	139.0	92.2
PC	±4.6	±1.6	±8.6	±13.4	±0.01		±6.1	±10.0	±9.0	±4.8	±2.9	±11.4	±0.14	±0.16	±0.027	±0.26	±0.24			
ACC	0.41	0.46	0.47	0.48	0.48	0.31	0.23	0.16	0.26	0.33	0.43	0.41	0.32	0.38	0.33	0.39	0.02	0.35		
%	30	20	10	10	15	85	35	20	10	65	2	20	25	75	65	2	40	45	20	

Pedigree

Color HPS

	LCDR IMPACT 134F	3491039	BB	PP
	RFS HEAVY HITTER H45	3782005	BB	PP
	BCLR MISS BALDY E704	3322997	BH	PP
	W/C HEAVY HITTER 733M	4442162	BH	PP
	MR SR 71 RIGHT NOW E1538	CANSM - 1323080	3325668	BB PP
	W/C MISS WERNING 971G	3729677	B	PP
	W/C MISS WERNING 757E	3479603	B	PP