

**2025 TJSSA State Futurity
Genetic Evaluation Quiz
Junior Division**

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. A producer plans to keep a high percentage of his heifer calves as replacements. If he wants to minimize their calving difficulties, which EPD should he emphasize when selecting the sires to produce these replacements?
 - a. CE
 - b. BW
 - c. \$M
 - d. MCE

2. What does the percentile rank of an EPD tell us?
 - a. How close that EPD is to its true breeding value
 - b. The probability that the animal will pass that EPD value on to its offspring
 - c. How that EPD can be compared to breed average and to the EPDs of other animals within the same breed
 - d. The maximum amount that EPD could change as it becomes more accurate

3. Birth Weight, Weaning Weight and Calving Ease are examples of:
 - a. Base EPDs
 - b. Growth EPDs
 - c. Direct EPDs
 - d. Performance EPDs

4. 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™

5. You recently purchased two yearling Simmental bulls to turn out with your herd. Bull M31 has a BW EPD of 0.6, and Bull M48 has a BW EPD of -0.6. Which of the following is true?
 - a. You should expect M31 to sire calves with lighter average birth weights.
 - b. You should expect M48 to sire calves with lighter average birth weights.
 - c. You should expect the cows bred to M31 to calve earlier, on average.
 - d. You should expect the cows bred to M45 to calve earlier, on average.

6. In order for contemporary group data to be effective, the group should contain:
 - a. calves from at least two sires
 - b. calves with dams of a similar age
 - c. calves that are the same breed
 - d. calves born within the same 10-day window

7. Who is the current chairman of the ASA Board of Trustees?
 - a. AK Phillips
 - b. Chris Ivie
 - c. Dr. Jon DeClerck
 - d. Victor Guerra

8. Selecting bulls based on _____ allows breeders to make the most genetic progress within their herds.
 - a. genomic test results
 - b. performance records
 - c. EPDs
 - d. phenotype

9. In nearly every beef operation, what has the greatest impact on genetic progress?
 - a. Sire selection
 - b. Embryo transfer
 - c. Genomic testing
 - d. 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 10 through 16, use the information above.

- What is this cow's tattoo?
 - 2660685
 - KS
 - Y770
 - U851
- This cow is registered as 3/4 Simmental. What makes up the remainder of her breed composition?
 - Angus
 - Maine-Anjou
 - Limousin
 - Red Angus
- If you were to successfully flush this donor to a heterozygous black bull, what percentage of the resulting calves would you expect to be red?
 - 25%
 - 50%
 - 75%
 - 100%
- Locate the EPD that best predicts the amount of IMF in this female's progeny. What is its accuracy?
 - 0.41
 - 0.43
 - 0.50
 - 0.52
- Your breeding program emphasizes producing its own replacement heifers. You have a young red cow with a MWW EPD of 60.2. How would you expect the daughters produced by this female to compare to hers?
 - The daughters out of KS Miss Sequoia Y770 should produce calves with heavier adjusted weaning weights, on average.
 - The daughters out of KS Miss Sequoia Y770 should produce calves with lighter adjusted weaning weights, on average.
 - The daughters out of KS Miss Sequoia Y770 should have heavier adjusted weaning weights, on average.
 - The daughters out of KS Miss Sequoia Y770 should have lighter adjusted weaning weights, on average.
- Which of the following statements about this cow's Parental Verification status is most accurate?
 - She has been qualified through DNA to both her sire and dam.
 - She has been qualified through DNA to only her sire.
 - She has been qualified through DNA to only her dam.
 - She has not been qualified through DNA to either of her parents.
- ASR Ms Super Baldy U851 is the _____ of this female.
 - dam
 - granddam
 - donor dam
 - maternal dam

17. 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?
 - a. Test the color coat status of all of the cows and cull all of the red carriers.
 - b. Utilize only homozygous black sires.
 - c. Put embryos from black donor females into all of the cows that are red and/or have produced a red calf in the past.
 - d. Purchase a black herd bull with a sire and dam that are also black.

18. What is the term for a naturally hornless beef animal?
 - a. Polled
 - b. Homozygous
 - c. Scurred
 - d. Smooth

19. 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 has genomic enhanced EPDs.
 - d. Cow 308 was flushed and her ET calves have been registered.

For questions 20 through 28, 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
-
20. Which bull should you expect to sire offspring with the largest average ribeye area at 475 days of age?
 21. Which bull has the highest-ranking Marbling EPD?
 22. Which bull should you expect to produce daughters that are least likely to have calving difficulty as heifers?
 23. Which bull is the most likely to produce red calves?
 24. If all these bulls are used only on mature cows, which should you expect to sire the lightest average birth weights?
 25. How many of these bulls have Genomic Enhanced EPDs?
 - a. 1
 - b. 2
 - c. 3
 - d. 4
 26. Compare the WW EPDs of Bull B and Bull D. Based on their current EPDs, how many more pounds of adjusted weaning weight should you expect Bull D to produce per calf, on average?
 - a. 8.6 lbs.
 - b. 17.0 lbs.
 - c. 24.5 lbs.
 - d. 70.0 lbs.
 27. 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.
 28. How many of these bulls are the result of embryo transfer?
 - a. 1
 - b. 2
 - c. 3
 - d. 4

29. You are studying a bull sale catalog that includes a vast amount of information on each lot. Of the following, which is the most reliable in predicting whether or not a bull is safe for use on heifers?
- Actual BW
 - Adjusted BW
 - BW EPD
 - CE EPD
30. You have a Purebred Angus cow and a Purebred Simmental cow bred to the same AI sire. Which of the following statements about the resulting calves is true?
- They will be full sibs.
 - They will be paternal sibs.
 - They will be maternal sibs.
 - They will be flushmates.

TIEBREAKER QUESTIONS

Questions 31 through 35 are tiebreaker questions only.

31. 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?
- Bull K240
 - Bull L3077
 - It depends upon the accuracies of their YW EPDs.
 - It depends upon the ages of the cows they are used on.
32. If an animal is heterozygous for a certain trait, what is the term for the characteristic that does not appear in the phenotype?
- Transparent
 - Recessive
 - Carrier
 - Inherited
33. *Refer to the image to the right.*
Cards like these are used to submit what type of DNA sample?
- Saliva
 - Follicles (tail hair)
 - Tissue
 - Blood
34. In ASA's whole herd reporting program, what is the fall calving season?
- July through December
 - August through December
 - September through December
 - October through December
35. Which of the following statements about comparing EPDs across breeds is true?
- 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.
 - EPDs are specific to each breed association and cannot be used to directly compare animals from different breeds.
 - 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.



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