

-1/2 for towns/counties with no state identifiers  
-1/2 for measurements without units

Score \_\_\_\_\_

Place \_\_\_\_\_

Team Name \_\_\_\_\_

Answer Key \_\_\_\_\_

Team # \_\_\_\_\_

AK \_\_\_\_\_

Students' Names \_\_\_\_\_

Answer Key \_\_\_\_\_

### Answer Sheet

#### I. Highway Map (32 points)

1. (2 pts) Nashville is the state capital of Tennessee

2. (1 pt) L-39      1. -1 for not mentioning Tennessee or providing an incorrect state. -1/2 for just saying "capital". -1 for choosing an incorrect type of capital (e.g. national capital)

3. (1 pt) BNA

4. (1 pt) 14

5. (1 pt) I-40

6. (1 pt) False

7. (1 pt) b. State

8. (2 pts) The number 155 is placed inside an oval, which is the shape that indicates a state route.

9. (2 pts) Interstate 65 (also accept 65 or I-65)

10. (1 pt) a. 16A

11. (2 pts) Cumberland River  
(-1 for each extra waterway)

12. (1 pt) 58 minutes (or 0:58)

13. (1 pt) Welcome Centers

14. (1 pt) Customs Station

15. (2 pts) Customs stations are found at international borders, and there are no international borders on this map.

16. (1 pt) d. Washington

17. (1 pt) Rocky Hill, KY

18. (1 pt) J-14

19. (2 pts) The red "T"s mark a boundary between time zones

20. (2 pts) 88 miles

21. (2 pts) Yes, we will make it to Route 27.

22. (1 pt) H-19

23. (1 pt) Jessamine County

24. (1 pt) Lexington-Blue Grass Army Depot

#### II. Topographic Map (52 points)

25. (1 pt) 2000 feet

26. (1 pt) 20 feet

27. (3 pts) Latitude and longitude are approximately equal at the equator, but as latitude increases, the distance between longitude lines decreases since the Earth is less wide closer to the poles.

28. (2 pts) 3 1/2 degrees west

29. (3 pts) No, because it was under the control of the Thirteen Colonies when PLSS was first instituted, so it uses the metes and bounds system.

30. (1 pt) Buckeye Quadrangle

19. -1 for mentioning time zones but not boundary.  
20. -1 if off by 1. No credit if off by 2 or more.  
21. Just "Yes" is fine.  
24. ALL other answers/ variations receive no credit

27. Full credit if they demonstrate understanding of why longitude distances change. -2 if they mix up latitude and longitude. -1 if their answer implies that lat and long are never equal. -1 for minor lat/ long inaccuracies, -2 for major ones.

28. 1 pt for amount, 1 pt for direction

29. No credit for saying "Yes". 1.5 pts for saying "No". 1.5 pt for correct reason.

Either KY's use of metes and bounds or the 13 colonies' control of KY when PLSS was started may be mentioned for full credit.

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2. Do NOT accept N-13  
4. Does not need units  
5. Also accept 40  
8. Also accept "circle" for oval". -1 for just saying oval/circle and nothing else. -1/2 for not connecting the symbol to its meaning  
11. No credit if Cumberland River is not in the answer.  
15. -1/2 for just having second part of this answer. -1 for just having first part. No credit if they do not allude to international borders.

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Score \_\_\_\_\_

Place \_\_\_\_\_

50. 1 pt for steep, 1 pt for not good escape route

32. ½ credit for anything in the ranges of 930-934 or 940 ft.

31. (1 pt) SW7 (or 7)

50. (2 pts) It is steep, so it would not make a good escape route.

51. 1 pt for lower, 1 pt for reason.

33. ½ credit for 840 ft

32. (1 pt) between 935-939 feet

51. (2 pts) It will be lower because the contour lines are further apart along the Kentucky River.

Answers citing the KY River's age or higher stream order are also acceptable.

36. Also accept SW.

33. (1 pt) between 821-839 feet

34. (1 pt) 936 feet

35. (1 pt) 2 (centers of worship)

38. -1/2 for missing N or W. Full credit for within 5", -1/2 for within 10". -1 for off by more.

36. (1 pt) west by southwest (WSW)

37. (1 pt) 947 feet

38. (2 pts) 37°47'47" N, 84°32'55" W

52. (6 pts, 2 pts bonus) Use graph on page 3 of this sheet.

53. -1/2 for missing N or E. Full credit for within 50 m, -1/2 for within 100 m. -1 if off by more.

39. (2 pts) Sulphur Well School

53. (2 pts) 4187000 N, 718620 E

54. (2 pts) 3650 feet

54. Full credit for within 50 ft, -1 for within 100 m. No credit if off by more.

41. 1 pt for mentioning it is a road, 1 pt for demonstrating understanding of its divertive nature

40. (1 pt) 0

41. (2 pts) A bypass is a roadway that diverts traffic around a more congested area.

### III. Student Created Map (16 points)

Draw map on space provided on page 4 of this sheet.

1. 1 point
2. 1 point
3. 3 points
4. 2 points
5. 2 points
6. 1 point
7. 1 point
8. 1 point
9. 2 points
10. 1 point
11. 1 point

44. ½ pt for each correct direction. -1/2 if within 2° of the answers, -1 if within 3° or more.

42. (1 pt) b. 1988

43. -1/2 for each incorrect word

43. (1 pt) Business Route

44. (2 pts) N 17° E or N 18° E

45. Any of these answers is acceptable for full credit, as long as they mention both B.R. 27 and the bypass

45. (2 pts) The bypass diverts traffic from B.R. 27. B.R. 27 is the business route for the bypass, which is Route 27. Route 27 used to go into town, but the bypass turned it into B.R. 27.

46. (1 pt) Medium duty

47. 1 pt for "no", 1 pt for explanation

47. (2 pts) No, because there is no bridge that crosses the Kentucky River.

### IV. Tiebreakers

1. 30
2. Marcia McNutt
3. March 3, 1879

48/49. Full credit if within 5% of answer, -1 if within 10%, no credit if more than 10% off.

48. (2 pts) 4.8%

49. (2 pts) 34.4 ‰

Tiebreakers 1 and 3: Closest answer wins tiebreaker

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Score \_\_\_\_\_

Place \_\_\_\_\_

50.

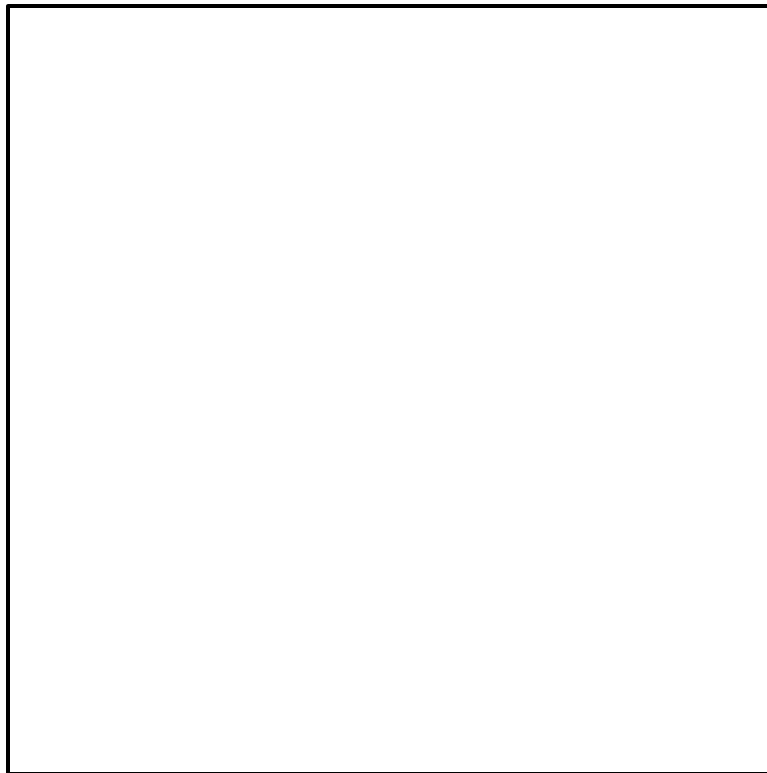
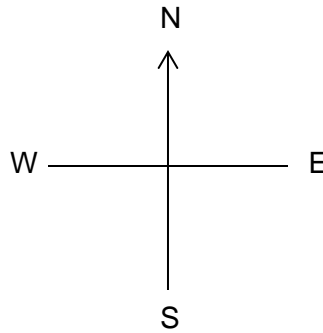


Profile Rubric:

- 4 points – shape (- $\frac{1}{2}$  for minor shape errors, no credit if following features are indistinguishable)
  - Peaks (1.5 point)
  - Valleys (1.5 point)
  - Plateau (1 point)
- 1 point – axes labeled with units correctly so it matches with profile
  - - $\frac{1}{2}$  for no units, - $\frac{1}{2}$  if labels and profile shape differ by 20 feet or less
  - No credit if labels and profile shape have a difference of over 20 feet
- $\frac{1}{2}$  point for each correctly labeled church
- Bonus
  - $\frac{1}{2}$  point for each correctly labeled road/stream

### Student Created Map

The square below represents one section (one square mile). Please draw the requested features within the square. The scale is 1:15840 which means that 1" :  $\frac{1}{4}$  mile or 1" : 15840".



1. (1 pt); -1/2 for placement other than center
2. (1 pt);  $\frac{1}{2}$  point for each label (placement/format)
3. (3 pts);  $\frac{1}{2}$  for correct entrance,  $\frac{1}{2}$  for first azimuth,  $\frac{1}{2}$  for start of curve,  $\frac{1}{2}$  final azimuth,  $\frac{1}{2}$  for smooth curve,  $\frac{1}{2}$  for not entering specified section
4. (2 pts); 1 pt for correct start, 1 pt for correct azimuth
5. (2 pts);  $\frac{1}{2}$  pt for correct entrance,  $\frac{1}{2}$  for correct exit, 1 pt for correct boundary format

6. (1 pt);  $\frac{1}{2}$  pt for symbol,  $\frac{1}{2}$  pt for placement
7. (1 pt);  $\frac{1}{2}$  pt for symbol,  $\frac{1}{2}$  pt for position in relation to church
8. (1 pt);  $\frac{1}{2}$  pt for location,  $\frac{1}{2}$  pt for distribution
9. (2 pt);  $\frac{1}{2}$  pt for location,  $\frac{1}{2}$  pt for spot elevation,  $\frac{1}{2}$  pt for number of contours,  $\frac{1}{2}$  pt for index contour at 700 ft (- $\frac{1}{2}$  if contours are not approx. circular)
10. (1 pt);  $\frac{1}{2}$  pt for symbols,  $\frac{1}{2}$  pt for locations
11. (1 pt);  $\frac{1}{2}$  pt for S of highway,  $\frac{1}{2}$  pt for E of boundary, - $\frac{1}{2}$  if shaded incorrectly