

Chapter 9 Answer Key

1. c. $1,320 \text{ feet } (1/4 \text{ mi}) \times 1,320 \text{ feet} = 1,742,400 \text{ square feet}$ divided by $43,560$ (feet in an acre) = 40 acres. (Math FAQ's)
2. c. Township sections are numbered 1-36 and Section 1 is always in the northeast upper right-hand corner. The numbering proceeds from right to left, to the upper left-hand corner (westerly). (159)
3. b. Multiply all denominators: $2 \times 4 \times 4 \times 4 = 128$; Divide 640 (acres in a section) by $128 = 5$ acres. (159)
4. d. Each section is 1 square mile. Each township is 6 miles square and contains 36 square miles and so a township contains 36 sections. (159)
5. b. The land on either side of a principal meridian is divided into six mile-wide strips that run north and south, parallel to the meridian, and the strips of land are called ranges. (158)
6. c. A metes-and-bounds description starts at a POB (point of beginning) and always end back at the POB so that the described tract is completely enclosed. (155, 156)
7. c. $72.5 \times 100 = 7,250$ (square feet of each lot); $43,560 \times 2 = 87,040$ (2 acres); $87,040$ divided by $7,250 = 12$ (lots). (Math FAQ's)
8. a. Multiply denominators $4 \times 4 = 16$; 640 acres (1 section) divided by $16 = 40$ (acres); $40 \times \$2,500$ per acre = $\$100,000$ (sales price); $\$100,000 \times 5\%$ (.05) = $\$5,000$ (commission). (159, Math FAQ's)
9. b. By law, each section number 16 is set aside for school purposes. (159)
10. d. A metes-and –bounds description starts at a POB (point of beginning) and always ends back at the POB so that the described tract is completely enclosed. (155)
11. a. $5,280 \text{ feet} = 1 \text{ mile}$; $.5 \times 5,280 = 2,640 \text{ feet} = \text{half mile}$; $2,640 + 5280 = 7,920$ (linear feet of fence). (Math FAQ's)
12. b. The base lines run east and west in a rectangular survey system, while the principal meridians run north and south. (157)

13. b. 5% of a township is 1,152 acres ($.05 \times 23,040$ acres, which is 640 acres x 36 sections). 2 sections (2 square miles) are 1,280 acres. (159, Math FAQ's)
14. b. This parcel of land has only three sides. $5,280 \text{ feet} \times 2,640 \text{ feet} = 13,939,200 \text{ sq feet}$; Divide by $43,560 \text{ sq feet}$ (one acre) = 320 (acres); Divide by $\frac{1}{2} = 160$ (acres). (159, Math FAQ's)
15. a. Each township contains 36 sections and each section is 1 square mile. (159)
16. a. $4,800 \text{ square feet}$ divided by 80 feet (one side) =60 front feet; $60 \times \$350/\text{ft} = \$21,000$ (sales price). (Math FAQ's)
17. d. The principal meridians run north and south in a rectangular survey system, and the base lines run east and west. (157)
18. c. A recorded subdivision plat, which becomes part of the legal description, uses the lot and block system. (163)
19. d. Fractional sections are undersized or oversized sections that may result from physical difficulties encountered in the actual survey, such as rivers and lakes. (161)
20. d. Each township contains 36 sections and each section is a square mile, or 640 acres. (159)
21. b. A metes-and-bounds system starts at a POB (point of beginning) and proceeds around the property's boundaries by referring to linear measurements, monuments, and directions. (155, 156)
22. c. Multiply denominators for first part: $4 \times 4 = 16$; 640 acres divided by 16 = 40 acres; multiply denominators for second part $2 \times 4 \times 4 = 32$; 640 divided by 32 = 20 (acres).; $40 + 20 = 60$ (acres). (159)
23. d. The lot and block system is often used to describe property in subdivisions. (163)
24. b. One section: $5,280 \text{ feet} \times 5,280 \text{ feet}$. Half has sold, so $5,280 \text{ feet} \times 2,640 \text{ feet}$. Fencing is linear: $5,280 + 2,640 + 5,280 + 2,640$ minus 12 feet (2 gates) = 15,828 (linear feet). (Math FAQ's)