

6th Grade Unit 5: Lesson 22-1

Check Your Understanding (p. 280):

6. a. No: $4 + 4 = 8$.
b. Yes: $6 + 4 > 8$; scalene.
7. The sum of any two side lengths must be greater than the length of the third side.

Lesson 22-1 Practice (p. 280):

8. Yes: $5 + 5 > 5$; equilateral.
9. No: $3 + 3 < 7$.
10. Yes: $4 + 4 > 7$; isosceles.
11. Yes: $4 + 5 > 8$; scalene.
12. No: $1 + 2 < 8$.
13. No: $8 + 4 = 12$.
14. Yes: $5 + 12 > 13$; scalene.
15. A and C
16. No, you only have to find the sum of the two shortest sides. If their sum is not greater than the third side, a triangle cannot be formed.
17. a. Answers may vary. Sample answer:
By the Triangle Inequality Property, the minimum length in whole centimeters of the third side is 3 cm ($9 + 3 > 11$).
b. The maximum length in whole centimeters is 19 cm ($9 + 11 > 19$).
So the length of the third side in whole centimeters must be at least 3 cm and no more than 19 cm.