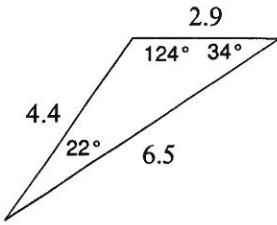


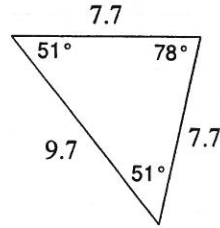
Classify each triangle by its angles and sides.

25)



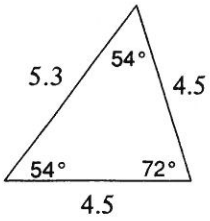
- A) acute isosceles
- B) obtuse scalene
- C) equilateral
- D) right isosceles

26)



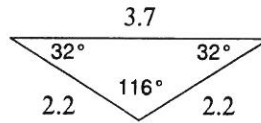
- A) acute isosceles
- B) equilateral
- C) obtuse isosceles
- D) right isosceles

27)



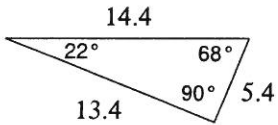
- A) acute isosceles
- B) equilateral
- C) acute scalene
- D) obtuse isosceles

28)



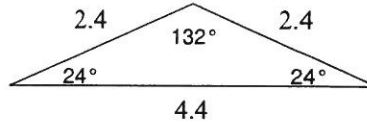
- A) right isosceles
- B) acute scalene
- C) obtuse scalene
- D) obtuse isosceles

29)



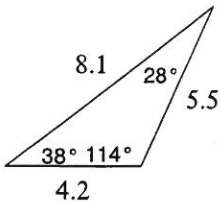
- A) right isosceles
- B) acute scalene
- C) equilateral
- D) right scalene

30)



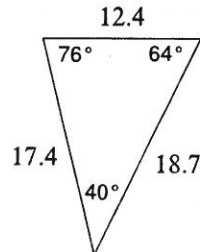
- A) acute scalene
- B) obtuse scalene
- C) obtuse isosceles
- D) right scalene

31)



- A) equilateral
- B) acute isosceles
- C) obtuse scalene
- D) acute scalene

32)



- A) acute isosceles
- B) right scalene
- C) acute scalene
- D) obtuse isosceles

**Draw the triangle. Then, find  $x$  and the measure of each side of the triangle.**

33) Triangle KLM is equilateral with  $KM = d + 2$ ,  $LM = 12 - d$ , and  $KM = 4d - 13$ .

34) Triangle ABC is equilateral with  $AB = 3x - 2$ ,  $BC = 2x + 4$ , and  $CA = x + 10$ .

35) Triangle DEF is isosceles, angle D is the vertex angle,  $DE = x + 7$ ,  $DF = 3x - 1$ , and  $EF = 2x + 5$ .

36) Triangle FGH is equilateral with  $FG = x + 5$ ,  $GH = 3x - 9$ , and  $FH = 2x - 2$ .

37) Triangle LMN is isosceles, angle L is the vertex angle,  $LM = 3x - 2$ ,  $LN = 2x + 1$ , and  $MN = 5x - 2$ .

**Find the measures of the sides of triangle RST, sketch the triangle, and classify the triangle by its sides.**

38) R(-1,-3), S(4,4), T(8,-1)

39) R(0, 2), S(2, 5), T(4, 2)

40) R(1, 3), S(4, 7), T(5, 4)

## Answers to Classifying Triangles by Sides and/or Angles

- |       |       |       |       |
|-------|-------|-------|-------|
| 1) A  | 2) B  | 3) A  | 4) B  |
| 5) B  | 6) A  | 7) A  | 8) C  |
| 9) B  | 10) C | 11) A | 12) A |
| 13) B | 14) C | 15) B | 16) B |
| 17) C | 18) B | 19) D | 20) B |
| 21) B | 22) D | 23) C | 24) B |
| 25) B | 26) A | 27) A | 28) D |
| 29) D | 30) C | 31) C | 32) C |
- 33)  $d=5$ ; each side measures 7      34)  $x=6$ ; each side measure = 16
- 35)  $x=4$ ;  $DE=11$ ;  $DF=11$ ;  $EF=13$       36)  $x=7$ ;  $HF=12$ ;  $GH=12$ ;  $FG=12$
- 37)  $x=3$ ;  $LN=7$ ;  $LM=7$ ;  $NM=13$
- 38)  $RS=\sqrt{74}$ ;  $ST=\sqrt{41}$ ;  $RT=\sqrt{85}$ ; RST is scalene because the sides are all different measures
- 39)  $RS=\sqrt{13}$ ;  $ST=\sqrt{13}$ ;  $TR=4$ ; the triangle is isosceles because 2 sides are congruent
- 40)  $RS=5$ ;  $ST=\sqrt{10}$ ;  $TR=\sqrt{17}$ ; the triangle is scalene because all sides are different measures