Name: _____   Date _____

Topic: <u>Triangle Inequality Theorem - Worksheet 1</u>

1. **Lengths 13, 11, 10 could represent the measures of the sides of a triangle?**

2. **In triangle KLH, <K = 40° and <K > <L. Which is the smallest side of the triangle?**

3. **Two sides of an isosceles triangle measures 24 and 11. What is the possible value of the third side?**

4. **In triangle FGH, an exterior angle at F measures 70°, and <G = 50°. Which is the longest side of the triangle?**

5. **Lengths 16, 11, 18 could represent the measures of the sides of a triangle?**

6. **In triangle KLM, <K = 55° and <L = 40°. Which is the longest side of the triangle?**

7. **In triangle NOP, <N = 95° and <N > <O > <P. Which is the longest side of the triangle?**

8. **In ΔPQR, PQ = 8, QR = 7, RP = 15. Which is the largest angle?**

9. **In triangle RPS, an exterior angle at R measures 64°, and <P = 26°. Which is the longest side of the triangle?**

10. **Two sides of an isosceles triangle measures 16 and 9. What is the possible value of the third side?**

Name: _____   Date _____

Topic: <u>Triangle Inequality Theorem - Worksheet 2</u>

1. **Lengths 15, 13, 12 could represent the measures of the sides of a triangle?**

2. **In triangle GMD, <G = 60° and <G > <M. Which is the smallest side of the triangle?**

3. **Two sides of an isosceles triangle measures 25 and 12. What is the possible value of the third side?**

4. **In triangle IJK, an exterior angle at I measures 65°, and <J = 35°. Which is the longest side of the triangle?**

5. **Lengths 17, 10, 6 could represent the measures of the sides of a triangle?**

6. **In triangle OPQ, <O = 50° and <P = 35°. Which is the longest side of the triangle?**

7. **In triangle QRS, <Q = 92° and <Q > <R > <S. Which is the longest side of the triangle?**

8. **In ΔSTU, ST = 7, TU = 8, US = 14. Which is the largest angle?**

9. **In triangle TUV, an exterior angle at T measures 62°, and <U = 28°. Which is the longest side of the triangle?**

10. **Two sides of an isosceles triangle measures 14 and 11. What is the possible value of the third side?**

Name: _____ Date _____

Topic: <u>Triangle Inequality Theorem - Worksheet 3</u>

1. **Lengths 12, 7, 3 could represent the measures of the sides of a triangle?**

2. **In triangle HDC, <H = 45° and <H > <D. Which is the smallest side of the triangle?**

3. **Two sides of an isosceles triangle measures 26 and 10. What is the possible value of the third side?**

4. **In triangle LMN, an exterior angle at L measures 60°, and <M = 30°. Which is the longest side of the triangle?**

5. **Lengths 14, 13, 16 could represent the measures of the sides of a triangle?**

6. **In triangle RST, <R = 55° and <S = 40°. Which is the longest side of the triangle?**

7. **In triangle TUV, <T = 96° and <T > <U > <V. Which is the longest side of the triangle?**

8. **In ΔXYZ, XY = 9, YZ = 13, ZX = 11. Which is the largest angle?**

9. **In triangle WXY, an exterior angle at W measures 68°, and <X = 22°. Which is the longest side of the triangle?**

10. **Two sides of an isosceles triangle measures 7 and 16. What is the possible value of the third side?**

Topic: <u>Triangle Inequality Theorem - Worksheet 4</u>

1.   **Lengths 16, 9, 15 could represent the measures of the sides of a triangle?**

2.   **In triangle SLR, <S = 55° and <S > <L. Which is the smallest side of the triangle?**

3.   **Two sides of an isosceles triangle measures 22 and 12. What is the possible value of the third side?**

4.   **In triangle ABC, an exterior angle at A measures 90°, and <B = 45°. Which is the longest side of the triangle?**

5.   **Lengths 18, 6, 9 could represent the measures of the sides of a triangle?**

6.   **In triangle UVW, <U = 56° and <V = 42°. Which is the longest side of the triangle?**

7.   **In triangle ABC, <A = 88° and <A > <B > <C. Which is the longest side of the triangle?**

8.   **In ΔDEF, DE = 15, EF = 12, FD = 12. Which is the largest angle?**

9.   **In triangle JKL, an exterior angle at J measures 70°, and <J = 25°. Which is the longest side of the triangle?**

10.   **Two sides of an isosceles triangle measures 10 and 18. What is the possible value of the third side?**

Topic: <u>Triangle Inequality Theorem - Worksheet 5</u>

1. **Lengths 15, 10, 26 could represent the measures of the sides of a triangle?**

2. **In triangle KFD, <K = 58° and <K > <F. Which is the smallest side of the triangle?**

3. **Two sides of an isosceles triangle measures 26 and 11. What is the possible value of the third side?**

4. **In triangle RST, an exterior angle at R measures 98°, and <S = 35°. Which is the longest side of the triangle?**

5. **Lengths 14, 5, 12 could represent the measures of the sides of a triangle?**

6. **In triangle XYZ, <X = 52° and <Y = 44°. Which is the longest side of the triangle?**

7. **In triangle GHI, <G = 83° and <G > <H > <I. Which is the longest side of the triangle?**

8. **In ΔMNO, MN = 14, NO = 18, OM = 11. Which is the largest angle?**

9. **In triangle PQR, an exterior angle at P measures 75°, and <Q = 35°. Which is the longest side of the triangle?**

10. **Two sides of an isosceles triangle measures 9 and 16. What is the possible value of the third side?**