**Triangle Angle Relationships and Algebra**

With your partner solve each problem.

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| 1. The measures of the angles of a triangle are given as *x*°, 3x° and 4x°. What are the measures of each angle?
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| Draw and label a triangle: | Write and solve an equation: | Find each angle measure: |
| 1. One of the congruent angles of an isosceles triangle measures 51°. Find the measures of the other angles.
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| Draw and label a triangle: | Write and solve an equation: | Find each angle measure: |
| 1. Two angles of a triangle have the same measure. The sum of the measures of these angles is one-half the measure of the third angle. Find the measures of the angles of the triangle.
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| Draw and label a triangle: | Write and solve an equation: | Find each angle measure: |
| 1. The measure of one angle of a triangle is twice the measure of a second angle. The measure of the third angle is 12 less than the sum of the other two. Find the measure of the angles of the triangle.
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| Draw and label a triangle: | Write and solve an equation: | Find each angle measure: |
| 1. The exterior angle of a triangle measures 93°. The remote interior measures are *x* and *x* – 13. Find the measure of each remote interior angle.
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| Draw and label a triangle: | Write and solve an equation: | Find each angle measure: |
| 1. The exterior angle of a triangle has a measure of 3*x*. The remote interior angles measure 2*x* + 10 and *x* – 1. Find the value of *x*, each interior angle of the triangle and the exterior angle.
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| Draw and label a triangle: | Write and solve an equation: | Find each angle measure: |
| Find the value of each variable and the measure of each angle. |
| 7. 3xx – 15 x + 30 |
| 8.x + 30x 5x + 10 |
| 9.b°a°72° |
| 10.3x + 55305x - 5 |