## **Writing Equations from Word Problems**

For each word problem, write and equation and solve.

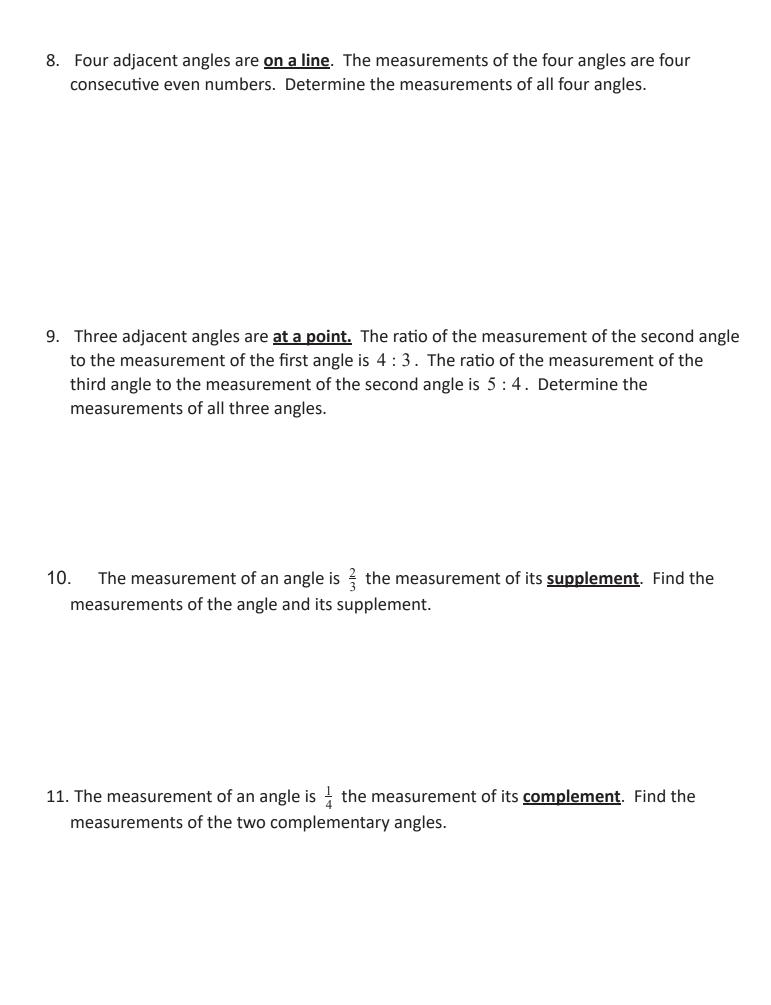
1. The measure of a complement of an angle is  $32^{\circ}$  more than three times the angle. Find the measurement of the two angles.

2. The supplement of the measurement of an angle is  $16^{\circ}$  less than three times the angle. Find the measurement of the angle and its supplement.

3. The measurement of the complement of an angle exceeds the measure of the angle by 25% . Find the measurement of the angle and its complement.

4. The ratio of the measurement of an angle to its complement is  $\,1:2\,.\,$  Find the measurement of the angle and its complement.

5.	The ratio of the measurement of an angle to its supplement is $3:5$ . Find the measurement of the angle and its supplement.
6.	Let $x$ represent the measurement of an acute angle in degrees. The ratio of the complement of $x$ to the supplement of $x$ is $x$ is $x$ is $x$ is 2 in Square 1. Guess and check to determine the value of $x$ is 2 in Square 2. Explain why your answer is correct.
7.	Three adjacent angles are <u>at a point</u> . The second angle is $20^\circ$ more than the first, and the third angle is $20^\circ$ more than the second angle.  a. Find the measurements of all three angles.
	b. Compare the expressions you used for the three angles and their combined expression. Explain how they are equal and how they reveal different information about this situation.



	Five angles are at a point. The measurement of each angle is one of five consecutive, positive whole numbers.
a.	Determine the measurements of all five angles.
	Compare the expressions you used for the five angles and their combined expression. Explain how they are equivalent and how they reveal different information about this situation.
con mea	t $x^\circ$ be the measurement of an angle. The ratio of the measurement of the <b>nplement</b> of the angle to the measurement of the <b>supplement</b> of the angle is $1:3$ . The assurement of the complement of the angle and the measurement of the supplement of angle have a sum of $180^\circ$ . Use a tape diagram to find the measurement of this angle.
t	e difference between three times the measurement of the complement of an angle and the measurement of the supplement of that angle is $20^{\circ}$ . What is the measurement of the angle?