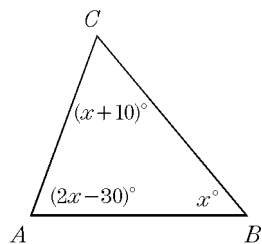


## Triangle Sums

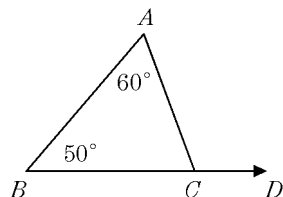
Name: \_\_\_\_\_

14 November 2018

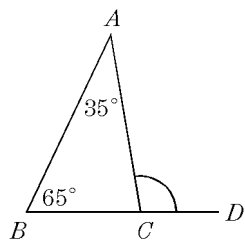
1. In the accompanying diagram,  $m\angle A = 2x - 30$ ,  $m\angle B = x$ , and  $m\angle C = x + 10$ . Find the number of degrees in  $\angle B$ .



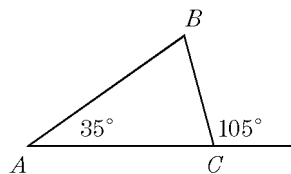
2. The measures of the angles of a triangle are represented by  $4x$ ,  $x + 40$ , and  $2x$ . Find the value of  $x$ .
3. The measures of the angles of a triangle are represented by  $(3x - 20)$ ,  $(7x + 30)$ , and  $(2x + 50)$ . Find  $x$ .
4. In the accompanying diagram,  $\angle ACD$  is an exterior angle of  $\triangle ABC$ . If  $m\angle A = 60$  and  $m\angle B = 50$ , find  $m\angle ACD$ .



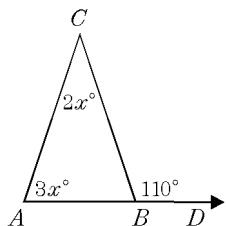
5. In the accompanying diagram,  $\angle ACD$  is an exterior angle of  $\triangle ABC$ . If  $m\angle A = 35$  and  $m\angle B = 65$ , find  $m\angle ACD$ .



6. In the accompanying diagram of  $\triangle ABC$ , the measure of an exterior angle at C is 105 and  $m\angle A = 35$ . Find  $m\angle B$ .



7. In the accompanying diagram, the measure of exterior angle  $CBD$  is  $110^\circ$ . If the measures of the two nonadjacent interior angles are represented by  $3x^\circ$  and  $2x^\circ$ , find the value of  $x$ .



8. In  $\triangle ABC$ ,  $m\angle B$  is  $10^\circ$  larger than  $m\angle A$ , and  $m\angle C$  is  $5^\circ$  less than 3 times  $m\angle A$ . Find  $m\angle A$ .

9. The number of degrees in the measures of the angles of a triangle are represented by  $x$ ,  $3x + 7$ , and  $4x + 5$ . Find the value of  $x$ .
10. If the measures of the angles of a triangle are represented by  $x$ ,  $3x + 6$ , and  $2x - 6$ , find the value of  $x$ .

. BECA / Mr. Huson / Geometry Triangle Sums 12/16/2014

- |         |     |
|---------|-----|
| 1.      |     |
| Answer: | 50  |
| 2.      |     |
| Answer: | 20  |
| 3.      |     |
| Answer: | 10  |
| 4.      |     |
| Answer: | 110 |
| 5.      |     |
| Answer: | 100 |
| 6.      |     |
| Answer: | 70  |
| 7.      |     |
| Answer: | 22  |
| 8.      |     |
| Answer: | 35  |
| 9.      |     |
| Answer: | 21  |
| 10.     |     |
| Answer: | 30  |