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Triangle angle problems for Grade 7

Practice worksheet - Maths · Grade 7

Name: _____ Date: _____

Show your working. Answers and explanations follow on a separate page.

Try each task before opening its answer. Give an example or reason, not only a label.

Write an answer and your reason before opening the explanation. Check the reasoning as well as the final answer.

1. Two interior angles of a triangle are 40° and 65°. Find the third angle.

2. A right triangle has another interior angle of 35°. Find the remaining angle.

3. A triangle has an interior angle of 70°. Find the adjacent exterior angle formed by extending one side.

4. The two remote interior angles of a triangle are 45° and 80°. Find the exterior angle.

5. A triangle has an exterior angle of 120° and one remote interior angle of 50°. Find the other remote angle.

6. An isosceles triangle has a vertex angle of 80° between its equal sides. Find each base angle.

7. An isosceles triangle has a base angle of 55°. Find the vertex angle between its equal sides.

8. Find each interior angle of an equilateral triangle.

Practice continued

9. A triangle has interior angles x°, x° and 2x°. Find x.

10. A triangle has interior angles (x + 10)°, (x + 20)° and (x + 30)°. Find x.

11. Can 80°, 60°, 50° be triangle interiors?

12. Can a triangle have two obtuse angles?

13. Which two angles make an exterior angle?

14. Should you trust measured angles on a not-to-scale diagram?

Answers and explanations

Answer key - Maths · Grade 7

Triangle angle problems for Grade 7

1. 75°.

$180-40-65=75$.

2. 55°.

The two acute angles total 90°.

3. 110°.

They form a straight pair.

4. 125°.

Add the two remote angles.

5. 70°.

$120-50=70$.

6. 50°.

$(180-80)\div 2=50$.

7. 70°.

$180-55-55=70$.

8. 60°.

Three equal angles share 180°.

9. 45°.

$4\,x=180$.

10. 40°.

$3\,x+60=180$.

11. No.

They total 190°.

12. No.

Their sum would already exceed 180°.

13. The two remote interior angles.

The adjacent interior forms a straight pair instead.

14. No.

Use the stated values and relationships.