

Grade 7 - Angle Relationships and Equations - Test

Common Core 7.G.B.5 · maths-pdf.fr/en/

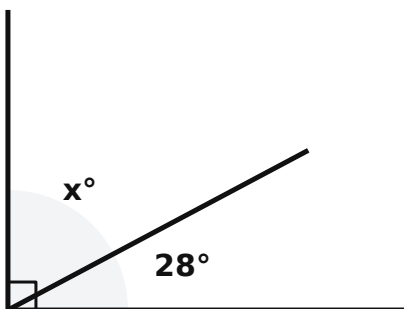
Name: _____ Class: _____ Date: ____/____/____

This 45-minute test checks supplementary, complementary, vertical, and adjacent angles, and simple equations for an unknown angle (Common Core 7.G.B.5). It has 9 questions worth 20 points in all. Show your work, because most questions give partial credit for correct steps.

About this test

- Grade: Grade 7
- Chapter: Angle Relationships and Equations
- Standards: 7.G.B.5
- Time: 45 minutes
- Total: 20 points

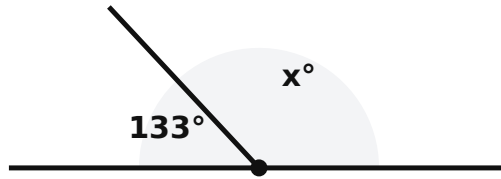
Question 1 - Complementary [2 pts]



A right angle.

Find x . Name the relationship between the two angles.

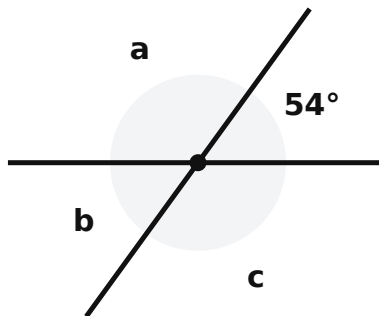
Question 2 - Supplementary [2 pts]



A straight line.

Find x and name the pair of angles.

Question 3 - Crossing lines [2 pts]



Two lines cross.

Find a , b , and c . Explain how you know.

Question 4 - Complementary expressions [2 pts]

Two complementary angles measure $(3x+6)^\circ$ and $(2x+24)^\circ$. Find x and both angles.

Question 5 - Vertical angles equation [2 pts]

Two vertical angles measure $(5x-8)^\circ$ and 52° . Find x .

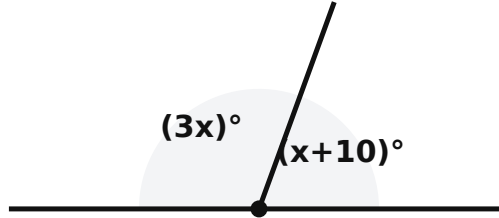
Question 6 - Around a point [2 pts]

Angles of 110° , 95° , and x° fit around a point with another angle of 60° . Find x .

Question 7 - Ratio [2 pts]

Two supplementary angles are in the ratio 4 : 5. Find both angles.

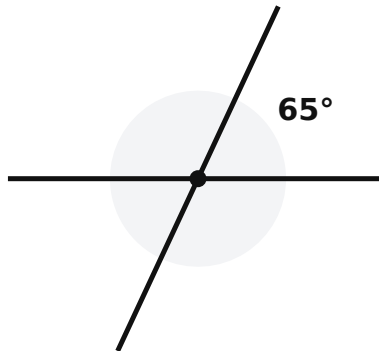
Question 8 - Linear pair equation [3 pts]



A linear pair.

- Write an equation for the two angles. (1 point)
- Solve for x . (1 point)
- Find both angle measures. (1 point)

Question 9 - Crossing roads [3 pts]



Two roads cross.

Two roads cross at a 65° angle, as shown. (a) Find the measures of the other three angles. (1 point) (b) Name the pairs of vertical angles. (1 point) (c) Explain why the angles of 65° and 115° are supplementary. (1 point)