# **Math 7 B Unit Test Guide**

## Angle Pairs Unit Test

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| **Item** | **Lesson Coverage** | **Objective** | **Lesson Page** | **Assessment Item** |
| 1 | Lesson 2: Adjacent Angles | Determine whether two angles in a geometric figure are adjacent. | p. 1-6 | *Use the image to answer the question.*Are the two indicated angles adjacent? Why or why not?Answer: No, the two indicated angles do not share a common ray. |
| 2 | Lesson 2: Adjacent Angles | Use the angle addition postulate to find the measure of an unknown angle in a simple figure. | p. 7-11 | *Use the image to answer the question.*What is the measure of $∠TSV$?Answer: 103$°$ |
| 3 | Lesson 3: Solve Equations with Adjacent Angles | Use facts about adjacent angles in a multi-step problem to write simple equations for an unknown angle in a figure. | p. 1-6 | *Use the image to answer the question.*What is an equation for these two adjacent angles?Answer: $\left(2x+3\right)°+\left(x-6\right)°=180°$ |
| 4 | Lesson 3: Solve Equations with Adjacent Angles | Use facts about adjacent angles in a multi-step problem to solve simple equations for an unknown angle in a figure. | p. 7-12 | Two adjacent angles, $∠1$ and $∠2$, form a resulting angle with measure 135°. If $m∠1=\left(2x\right)°$ and $m∠2=\left(2x+7\right)°$, what are the two unknown angle measures?Answer: $m∠1=64°$, $m∠2=71°$ |
| 5 | Lesson 4: Complementary Angles | Use the relationship between complementary angles to find the measure of an unknown angle in a simple figure. | p. 6-10 | A figure displays two complementary nonadjacent angles. If one of the angles has a measure of $39°$, what is the other angle measure?Answer: 51° |
| 6 | Lesson 5: Solve Equations with Complementary Angles | Use facts about complementary angles in a multi-step problem to write simple equations for an unknown angle in a figure. | p. 1-5 | A figure shows two nonadjacent angles with measures $(2x+3)°$ and $2x°$. If the angles are complementary, what is the equation for the angle measures?Answer: $\left(2x+3\right)°+2x°=90°$ |
| 7 | Lesson 5: Solve Equations with Complementary Angles | Use facts about complementary angles in a multi-step problem to solve simple equations for an unknown angle in a figure. | p. 6-10 | Two complementary angles have measures $\left(2x\right)°$ and $\left(3x\right)°$. What is the value of $x$ and the two angle measures?Answer: $x=18$, $\left(2x\right)°=36$, and $\left(3x\right)°=54$ |
| 8 | Lesson 6: Supplementary Angles | Use the relationship between supplementary angles to find the measure of an unknown angle in a simple figure. | p. 7-11 | Angles $j$ and $k$ are supplementary angles. What is $m∠j$ if $m∠k=117°$?Answer: $63°$ |
| 9 | Lesson 7: Solve Equations with Supplementary Angles | Use facts about supplementary angles in a multi-step problem to write simple equations for an unknown angle in a figure. | p. 1-5 | Two supplementary angles have measures $m∠ABC=105° $and $m∠CBD=\left(3x-24\right)°$. What is the equation to solve for *x*?$$(3x-24)° + \\_\\_\\_° = \\_\\_\\_°$$Answer: 105; 180 |
| 10 | Lesson 7: Solve Equations with Supplementary Angles | Use facts about supplementary angles in a multi-step problem to solve simple equations for an unknown angle in a figure. | p. 6-10 | Two angles are supplementary with measures $m∠ACB=4x°$ and $m∠BCD=\left(6x+50\right)°$. What is the measure of $∠ACB$?$$m∠ACB=\\_\\_\\_\\_\\_°$$Answer: 52 |
| 11 | Lesson 8: Vertical Angles | Determine whether two angles in a geometric figure are vertical angles. | p. 1-6 | *Use the image to answer the question.*Which angle is a vertical angle with $∠5$?Answer: 8 |
| 12 | Lesson 8: Vertical Angles | Use the relationship between vertical angles to find the measure of an unknown angle in a simple figure. | p. 7-11 | *Use the image to answer the question.*If $m∠2=47°$, what is $m∠4$?Answer: 43 |
| 13 | Lesson 9: Solve Equations with Vertical Angles | Use facts about vertical angles in a multi-step problem to write simple equations for an unknown angle in a figure. | p. 1-5 | *Use the image to answer the question.*$m∠5=112°$ and $m∠8=\left(2x+8\right)°$. What equation will solve for x?\_\_\_\_*x°* +\_\_\_\_\_° = \_\_\_\_\_°Answer: 2; 8; 112 |
| 14 | Lesson 9: Solve Equations with Vertical Angles | Use facts about vertical angles in a multi-step problem to solve simple equations for an unknown angle in a figure. | p. 6-11 | For two vertical angles with measures $m∠1=\left(2x+26\right)°$ and $m∠3=\left(3x+32\right)°$, what is the measure of each angle?Answer: 14 |
| 15 | Lesson 10: Find Missing Angles | Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write simple equations for an unknown angle in a figure. | p. 1-5 | In a diagram, $∠A$ and $∠B$ are vertical angles, and $∠B$ is a complementary angle with $∠C$. If $m∠A=22°$, write an equation that you can use to solve for $∠C$.Answer: $22°+m∠C=90°$ |