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| Properties (p.96)  Ex. 1 Writing Reasons  Checkpoint  Ex. 2 Using Properties in Real Life  *\*Target heart rate is the rate at which your achieve an effective workout without placing too much strain on your heart.*  Properties of Equality for Segments and Angles  Ex. 3 Using Properties of Measure  Checkpoint | **Algebraic Properties of Equality *(a,b,c are real numbers)***  **Addition Property** If a = b, then a + c = b + c.  **Subtraction Property** If a = b, then a - c = b - c.  **Multiplication Property** If a = b, then a c = b c.  **Division Property** If a = b and c ≠ 0, then =.  **Reflexive Property** For any real number a, a = a.  **Symmetric Property** If a = b, then b = a.  **Transitive Property** If a = b and b = c, then a = c.  **Substitution Property** If a = b, then a can be substituted for b in any  equation or expression..  **Distributive Property** a (b + c) = a b + a c  Solve -2x + 1 = 56 – 3x and write a reason for each step.  Statement Reason  -2x + 1 = 56 – 3x Given  Solve the equation and write a reason for each step.  12x – 3(x + 7) = 8x  Before exercising, you should find your target heart rate\*. Your target heart rate *r* (in beats per minute) can be determined from your age *a* (in years) using the equation *a* = 220 - *r*.   1. Solve for r and write a reason for each step. 2. Find the target heart rate for ages 20, 30, 40, 50, and 60. What happens as a person gets older?     Find the m<1.  m<1 + m<2 + m<3 + m<4 = 360°  m<2 + m<3 = m<4  m<1 = m<4  In the diagram at the right, B is the midpoint of segment AC and C is the midpoint of segment BD. Show that AB = CD. |