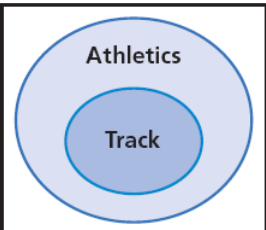


CHAPTER 2 REVIEW WORKSHEET FOR QUARTER EXAM

Put answers and work in boxes to the right of the problems. Be sure to show work when necessary.

<p>Section 2.1: Complete #1-4 Find the next item in each pattern.</p> <p>1. 3, 7, 11, 15, ... 2. -3, 6, -12, 24, ...</p> <p>3. Complete the conjecture “The product of two negative numbers is <u> ? </u>.”</p> <p>4. Show that the conjecture “The quotient of two integers is an integer” is false by finding a counterexample.</p>	1)	2)
<p>Section 2.2: Complete #5, 7, 8 Identify the hypothesis and conclusion of each conditional.</p> <p>5. A number is divisible by 10 if it ends in zero.</p> <p>Write a conditional statement from each of the following.</p> <p>7. Perpendicular lines intersect to form 90° angles.</p> <p>8. </p>	3)	4)
<p>Section 2.3: Complete #10, 12, 14, 15 Determine if each conditional is true. If false, give a counterexample.</p> <p>10. If a figure has four sides, then it is a square.</p> <p>12. Does the conclusion use inductive or deductive reasoning? To rent a boat, you must take a boating safety course. Jason rented a boat, so Jessica concludes that he has taken a boating safety course.</p> <p>14. Determine if the conjecture is valid by the Law of Syllogism. Given: If a triangle is isosceles, then it has two congruent sides. If a triangle has two congruent angles, then it has two congruent sides. Conjecture: If a triangle is isosceles, then it has two congruent angles.</p> <p>15. Draw a conclusion from the given information. Given: If the sum of the angles of a polygon is 360°, then it is a quadrilateral. If a polygon is a quadrilateral, then it has four sides. The sum of the angles of polygon <i>R</i> is 360°.</p>	5)	7)
	8)	
	10)	
	12)	
	14)	
	15)	

Section 2.4: Complete #17, 18, 20

17. For the conditional “If a triangle is scalene, then its sides have different lengths,” write the converse and a biconditional statement.
18. Determine if the biconditional “ $n + 3 = -1 \leftrightarrow n = -4$ ” is true. If false, give a counterexample.

Write each definition as a biconditional.

19. A parallelogram is a quadrilateral with two pairs of parallel sides.
20. Congruent angles have equal measures.

17)

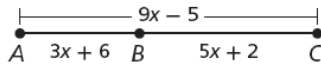
18)

20)

Section 2.5: Complete #23

Write a justification for each step.

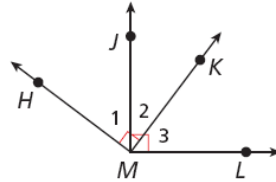
23. $AC = AB + BC$
 $9x - 5 = (3x + 6) + (5x + 2)$
 $9x - 5 = 8x + 8$
 $x - 5 = 8$
 $x = 13$



Section 2.6: Complete #24

24. Fill in the blanks to complete the two-column proof.

Given: $\angle HMK$ and $\angle JML$ are right angles.
 Prove: $\angle 1 \cong \angle 3$
 Proof:

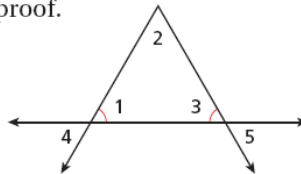


Statements	Reasons
1. a. <u> ? </u>	1. Given
2. b. <u> ? </u> c. <u> ? </u>	2. Adjacent angles that form a right angle are complementary.
3. $\angle 1 \cong \angle 3$	3. d. <u> ? </u>

Section 2.7: Complete #27

27. Use the given two-column proof to write a paragraph proof.

Given: $\angle 1 \cong \angle 3$
 Prove: $\angle 4 \cong \angle 5$
 Proof:



Statements	Reasons
1. $\angle 1 \cong \angle 3$	1. Given
2. $\angle 1 \cong \angle 4, \angle 3 \cong \angle 5$	2. Vert. \triangle Thm.
3. $\angle 1 \cong \angle 5$	3. Trans. Prop. of \cong
4. $\angle 4 \cong \angle 5$	4. Trans. Prop. of \cong