

## Geometry Midterm Packet Review Answers

### Part I – Fill in the blank.

- |                                  |                                  |
|----------------------------------|----------------------------------|
| 1. midpoint                      | 13. congruent                    |
| 2. across from the smallest side | 14. zero                         |
| 3. congruent                     | 15. their sum is 90              |
| 4. $BA + AC = BC$                | 16. $180^\circ$                  |
| 5. 1, 2                          | 17. congruent                    |
| 6. HL, ASA, SAS, AAS, SSS        | 18. contrapositive               |
| 7. line                          | 19. right angle                  |
| 8. III                           | 20. 2, 10                        |
| 9. less than $90^\circ$          | 21. hypotenuse                   |
| 10. equilateral triangles        | 22. undefined                    |
| 11. slope                        | 23. across from the longest side |
| 12. point                        | 24. congruent                    |

### PART II. FREE RESPONSE

#### Chapter 1

- |   |                            |
|---|----------------------------|
| 1. F  | 9. F                       |
| 2. T  | 10. 36                     |
| 3. T  | 11. 58                     |
| 4. T  | 12. $135^\circ$            |
| 5. F  | 13. $y = 10$               |
| 6. F  | 14. $x = 4$                |
| 7. $\sqrt{32} = \sqrt{16} \cdot \sqrt{2} = 4\sqrt{2}$ | 15. $m\angle 2 = 59^\circ$ |
| 8. (3, 5)   |                            |

#### Chapter 2

- If 2 lines intersect, then their intersection is exactly 1 point.
- If an animal is a tiger, then it is a cat. (**Don't use IT twice**)
- If an angle is a right angle, then it measures  $90^\circ$ .
- If 2 angles are vertical angles, then they are congruent.  
If 2 angles are congruent, then they are vertical angles.  
If 2 angles are not vertical angles, then they are not congruent.  
If 2 angles are not congruent, then they are not vertical angles.
- Cindy may drive a car. Law of Detachment
- If  $\overline{AB} \cong \overline{CD}$ , then  $CD = AB$ . Law of Syllogism
- No conclusion
- substitution
- Symmetric Property of Segment Equality
- Multiplication Property of Equality
- conclusion
- $m\angle 1 = 78^\circ$

### Chapter 3

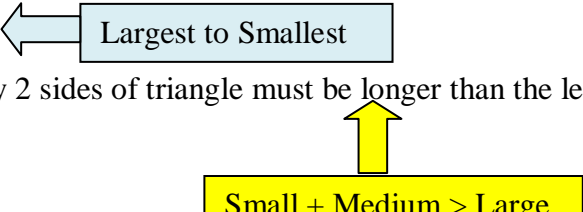
1. Same side interior / consecutive interior
2. corresponding angles
3. vertical angles
4. Alt. Interior angles
5. linear pair (supplementary is ok, too)
6.

$m\angle 3 = 140$	$m\angle 4 = 40$	$m\angle 5 = 140$
$m\angle 6 = 60$	$m\angle 7 = 40$	$m\angle 8 = 80$
$m\angle 9 = 60$	$m\angle 10 = 40$	$m\angle 11 = 80$
7.  $y = 104, x = 34$
8.  $x = 47, y = 12$
9.  $x = 24$
10.  $x = 48$
11. vertical
12.  $3/2$  (since you want the perpendicular slope ☺)
13.  $y - 3 = 4(x + 1)$  OR  $y = 4x + 7$
14.  $y - 3 = \frac{1}{2}(x + 2)$  OR  $y = \frac{1}{2}x + 4$

### Chapter 4

- |             |                      |
|-------------|----------------------|
| 1. F        | 10. always           |
| 2. T        | 11. sometimes        |
| 3. F        | 12. never            |
| 4. T        | 13. never            |
| 5. $x = 12$ | 14. always           |
| 6. $x = 25$ | 15. $x = 60, y = 6$  |
| 7. HL       | 16. $x = 49, y = 82$ |
| 8. ASA      | 17. $x = 40, y = 70$ |
| 9. SAS      | 18. B                |

### Chapter 5

1. circumcenter
  2. incenter
  3. centroid
  4. orthocenter
  5. WY, XY, WX
  6. WY, XY, WX
  7. NO. Sum of any 2 sides of triangle must be longer than the length of the 3<sup>rd</sup> side.
  8.  $<$
  9.  $>$
  10.  $x < 30$
- 

## Chapter 6

1. AA, SAS, SSS
2.  $2x = 20$ ,  $5x = 50$ ,  $11x = 110$
3.  $4\sqrt{6}$
4.  $BC = 17.5$
5.  $RP = 6.7$
6. Perimeter of smaller poster = 68 cm

### Midterm MC Review, Part 1

1 D	9 D	17 D	26 D
2 C	10 C	18 D	27 D
3 A	11 D	19 A	28 C
4 B	12 D	20 A	29 D
5 B	13 C	21 B	30 C
6 B	14 C	22 A	31 B
7 D	15 D	23 A	32 B
8 B	16 B	24 B	33 D
		25 D	

### Midterm Review, Part 2

34	C	44	C	54	B	62	C	69	D	79	A	89	D
35	C	45	A	55	D	63	D	70	A	80	A	90	B
36	A	46	C	56	B	64	A	71	D	81	B	91	A
37	A	47	XX	57	A	65	C	72	B	82	A	92	C
38	A	48	C	58	D	66	C	73	B	83	B	93	B
39	A	49	A	59	A	67	C	74	A	84	B	93	B
40	C	50	B	60	C	68	D	75	A	85	A	94	A
41	C	51	C	61	C			76	B	86	B		
42	A	52	C					77	A	87	A		
43	C	53	B					78	B	88	B		