

# Geometry - June 2015

## Part 1

1. 3	5. 2	9. 2	13. 2	17. 1	21. 2	25. 4
2. 3	6. 3	10. 1	14. 1	18. 4	22. 3	26. 3
3. 4	7. 1	11. 3	15. 3	19. 3	23. 1	27. 1
4. 1	8. 3	12. 2	16. 2	20. 4	24. 2	28. 4

## Part 2

29.  $5x + 6x + 7x = 180$

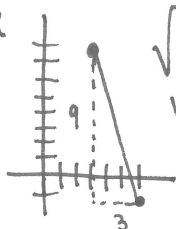
$18x = 180$

$x = 10$

$5(10) = 50$

The smallest  $\angle$  is  $50^\circ$

33.



$\sqrt{9^2 + 3^2} = CD$

$\sqrt{81 + 9} = CD$

$\sqrt{90} = CD$

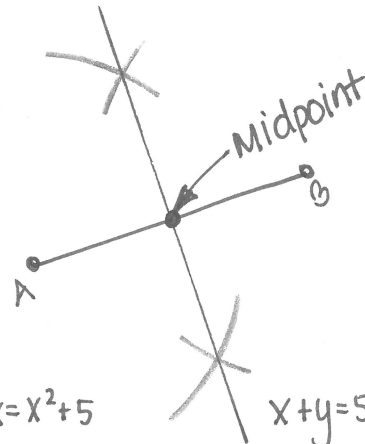
$3\sqrt{10} = \overline{CD}$

30.  $A(-1, 1) \rightarrow A'(1, -1)$

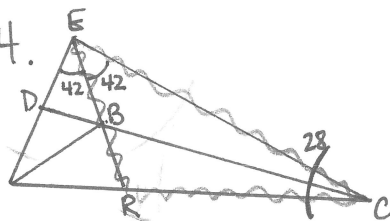
$B(1, 3) \rightarrow B'(3, 1)$

$C(4, 1) \rightarrow C'(1, 4)$

31. skip 32.



34.



$42 + 28 = 70$

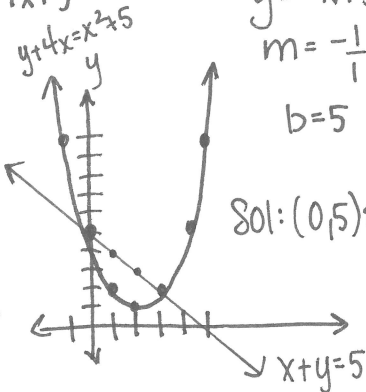
$m\angle BRC = 180 - 70$

$m\angle BRC = 110^\circ$

35.  $y + 4x = x^2 + 5$

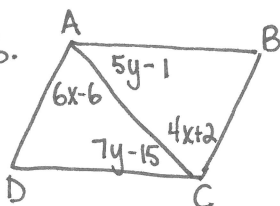
$y = x^2 - 4x + 5$

x	y
-1	10
0	5
1	2
2	1
3	2
4	5
5	10



Sol:  $(0, 5)$  &  $(3, 2)$

36.



$m\angle BCA = 18$

$m\angle BAC = 34$

$6x - 6 = 4x + 2$

$2x - 6 = 2$

$2x = 8$

$x = 4$

$m\angle B = 180 - (34 + 18)$   
 $= 180 - 52$

$m\angle B = 128$

$7y - 15 = 5y - 1$

$2y - 15 = -1$

$2y = 14$

$y = 7$

37. skip

Part 4

38. Square ABCD

Given

$\angle B \cong \angle C$

a square has  
 $4 \cong$  angles

$\overline{BA} \cong \overline{CD}$

a sq. has  
 $4 \cong$  sides

$\overline{BE} \cong \overline{FC}$

Given

$\overline{BE} + \overline{EF} = \overline{EF} + \overline{FC}$

add prop of equal.

$\overline{BE} + \overline{EF} = \overline{BF}$   
 $\overline{EF} + \overline{FC} = \overline{EC}$

segment add.

$\overline{BF} \cong \overline{EC}$

substitution

$\triangle ABF \cong \triangle DCE$

SAS

$\overline{AF} \cong \overline{DE}$

corr parts  $\cong \triangle \cong$