

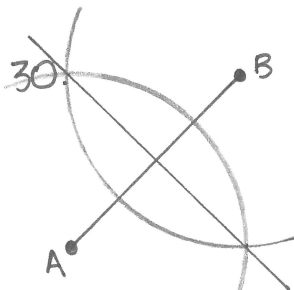
Geometry - January 2014

Part 1

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

Part 2

29. $V = 4\pi r^2$
 $V = 4\pi(2.5)^2$
 $V = 78.53981634$
 $V = 78.54 \text{ in}^2$

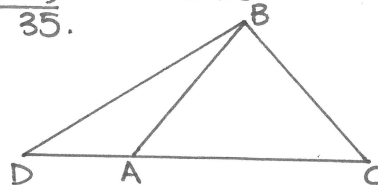


31. $d_{\overline{AB}} = \sqrt{(7-3)^2 + (2-4)^2}$
 $= \sqrt{4^2 + 6^2}$
 $= \sqrt{16 + 36}$
 $= \sqrt{52}$
 $= 2\sqrt{13}$

32. $V = Bh$
 $84 = 12h$
 $7 = h$
 7 meters

33. $y = \frac{1}{2}x - 1$ $y + 4 = -\frac{1}{2}(x - 2)$
 $m = \frac{1}{2}$ $y + 4 = -\frac{1}{2}x + 1$
 $y = -\frac{1}{2}x - 3$
 $m = -\frac{1}{2}$

34. skip Part 3
 35.



$m\angle D = x + 5x - 30 + 3x - 60 = 180$
 $9x - 90 = 180$
 $9x = 270$
 $x = 30$

$m\angle D = 30^\circ$

$m\angle BAC = m\angle DAB = 5(30) - 30$
 $= 150 - 30$
 $= 120$

$m\angle BAC = 180 - 120$
 $m\angle BAC = 60$

$\overline{BC} \quad 6y - 8 = 4y - 2$
 $2y - 8 = -2$
 $2y = 6$
 $y = 3$

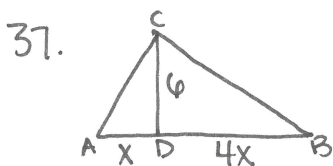
$\overline{BC} = 4(3) - 2$
 $\overline{BC} = 10$

$\overline{DC} = \overline{DA} + \overline{AC}$
 $= 10 + 10$

$\overline{DC} = 20$

Neither. The slopes are not \cong , nor are they negative reciprocals of each other.

36. $T(4, -5)$
 $A(-6, 5) \rightarrow A'(6, 5) \rightarrow A''(10, 0)$
 $B(-4, 8) \rightarrow B'(4, 8) \rightarrow B''(8, 3)$
 $C(1, 6) \rightarrow C'(-1, 6) \rightarrow C''(3, 1)$



$\frac{x}{6} = \frac{6}{4x}$ $BD = 4(3)$
 $4x^2 = 36$ $BD = 12$
 $x^2 = 9$
 $x = 3$

Part 4

- When a tangent of a circle & a diameter intersect they form \perp lines
- an \angle inscribed in a semi circle is a right \angle .
- all right \angle s are \cong
- AA \sim Theorem
- lengths of corresponding sides of similar Δ s are proportional.
- Product of the means = product of the extremes.