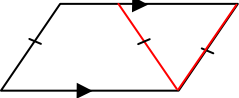Honors Geometry Final Test Review
Hints Extra Problems (Cumulative) Chapters 5-9

1. a) $2CD = MO$ b) $2CE = NO$ c) $2DE = MN$

2. $2(7) = 2t$

3. $2t = 33$

4. a) altitude   b) median   c) none

    d) perpendicular bisector e) angle bisector   f) altitude

5. a) $(7-4) < x < (7+4)$ b) $(17-9) < x < (17+9)$ c) $(5-5) < x < (5+5)$

    d) $(20-11) < x < (20+11)$ e) $(8-6) < x < (8+6)$ f) $(37-24) < x < (37+24)$

6. $4x-10 = 3x-2$

7. $4x-4 = 6x-22$

8. $2(4x+3) = 35$

9.

10. *Impossible* – this configuration makes a square which *__is__* a rectangle.

11. $m\angle 1 : base \angle's \cong, \angle 1 \& \angle 2$ *are supplementary.*

12. $m\angle 1 : base \angle's \cong, 67°\angle \& \angle 2$

13. Sum of area of top triangle (b=14, h=6) and area of lower triangle (b=14, h=11)

14. Area big triangle (b=13, h=6) minus area of smaller triangle (b=9, h=6)

15. $x^2 + 7^2 = 10^2$

16. $a^2 + 3^2 = 4^2$

17. $30° - 60° - 90°; 14 = \dfrac{x\sqrt{3}}{2}$

18. $45° - 45° - 90° : \sqrt{2}y = 28$

19. $30° - 60° - 90°$ *for* $r \& q; 45° - 45° - 90°$ *for* $s \& p$

20. $n = 4, m\angle 4 = \dfrac{360}{4}...$

21. $m\angle ACD = 90 + 50$

22. $m\angle CDE = 360 - 40 = 320; len\overset{\frown}{CDE} = \dfrac{320}{360}(2\pi 9)$

23. $m\angle GBM = 180 - 60 = 120; A = \dfrac{120}{360}\pi(5)^2$

24. $m\angle = 180 - 60 = 120; r = 4; A_{sec} = \dfrac{120}{360}\pi(4)^2 \, ; \, A_{\Delta} = \dfrac{1}{2}(4\sqrt{3})(2)$

25.

$x: \quad \dfrac{\frac{5}{3}}{\frac{4}{3}} = \dfrac{x}{20}; \, \dfrac{\frac{5}{3}}{\frac{4}{3}} = \dfrac{5}{3}\cdot\dfrac{3}{4} = \dfrac{5}{4}; \, \dfrac{x}{20} = \dfrac{x}{1}\cdot\dfrac{9}{20} = \dfrac{9x}{20}$

$y: \, Pythag \, Thm: \, \dfrac{5}{3} + \dfrac{4}{3} = \dfrac{9}{3} = 3 \, and \, \dfrac{25}{9} + \dfrac{20}{9} = \dfrac{45}{9} = 5$

26. $x + y = 12, \, x = y$

27. $\dfrac{x}{x-1} = \dfrac{x+4}{x+2}; \, x(x+2) = (x-1)(x+4); \, x^2 + 2x = x^2 + 4x - x - 4$

28. a) $x = 3\tan 37°$

   b) $x = \tan^{-1}\dfrac{8}{10}$

29. $\sin P = \dfrac{15}{17}, \, \cos P = \dfrac{8}{17}$

30. a) $x = 63.6° \approx 64°$

   b) $x = 11.03 \approx 11.0$

31. $x = -42\cos 28°, y = -42\sin 28°$

32. $x = \tan^{-1}\dfrac{.8}{1}, d = \sqrt{1^2 + .8^2}$

33. $2s^2 = 34^2, \, s = \sqrt{\dfrac{34\cdot 34}{2}} = 24.04$