1. a. $(2a, 0)$

b. $(0, 2b)$

c. (a, b)

d. $\sqrt{b^2 + a^2}$

e. $\sqrt{b^2 + a^2}$

f. $\sqrt{b^2 + a^2}$

g. $MA = MB = MC$

2. $W(0, h); Z(b, 0)$

3. $W(a, a); Z(a, 0)$

4. $W(-b, b); Z(-b, -b)$

5. $W(0, b); Z(a, 0)$

6. $W(-r, 0); Z(0, -t)$

7. $W(-b, c); Z(0, c)$

8. Answers may vary. Sample: $r = 3, t = 2$; slopes are $\frac{2}{3}$ and $-\frac{2}{3}$; all lengths are $\sqrt{13}$; the opp. sides have the same slope, so they are $\parallel$. The 4 sides are $\cong$.

9. a. Diag. of a rhombus are $\perp$.

b. Diag. of a $\square$ that is not a rhombus are not $\perp$.

10–15. Answers may vary. Samples are given.

10. A, C, H, F

11. B, D, H, F

12. A, B, F, E

13. A, C, G, E

14. A, C, F, E

15. A, D, G, F

16. $W(0, 2h); Z(2b, 0)$

17. $W(2a, 2a); Z(2a, 0)$

18. $W(-2b, 2b); Z(-2b, -2b)$

19. $W(0, b); Z(2a, 0)$

20. $W(-2r, 0); Z(0, -2t)$

21. $W(-2b, 2c); Z(0, 2c)$

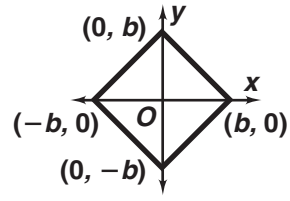
22. A

23. $(c - a, b)$

24. $(a, 0)$

35. $(-b, 0)$

26. a.



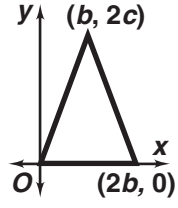
b. $(-b, 0), (0, b), (b, 0), (0, -b)$

c. $b\sqrt{2}$

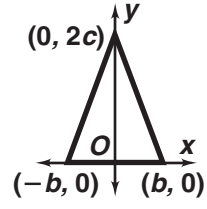
d. $1, -1$

e. Yes, because the product of the slopes is -1.

27 a.



b.

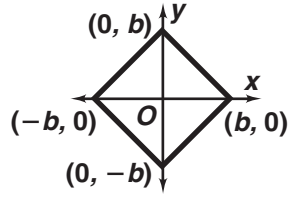


c. $\sqrt{b^2 + 4c^2}$

d. $\sqrt{b^2 + 4c^2}$

e. The lengths are $=$.

28.



29. Step 1: $(0, 0)$

Step 2: $(a, 0)$

Step 3: Since $m\angle 1 + m\angle 2 + 90 = 180$, $\angle 1$ and $\angle 2$ must be compl. $\angle 3$ and $\angle 2$ are the acute $\measuredangle$s of a rt. $\triangle$.

Step 4: $(-b, 0)$

Step 5: $(-b, a)$

Step 6: Using the formula for slope, the slope for $\ell_1 = \frac{b}{a}$ and the slope for $\ell_2 = -\frac{a}{b}$. Mult. the slopes, $\frac{b}{a} \cdot -\frac{a}{b} = -1$.