Warm Up 29

1. hypotenuse
2. isosceles; right
3. B
4. $8\sqrt{10}$

Lesson Practice 29

a. 29 yd, yes

b. 9 in., yes

c. $2\sqrt{58}$ cm

d. $6\sqrt{11}$ ft

e. $2\sqrt{337}$ inches

Practice 29

1. **a.** $m\angle 1 = 35°$ and $m\angle 2 = 55°$

b. no

2. 282 km

3.

S	T	$\sim T$	$S \wedge \sim T$
True	True	False	False
True	False	True	True
False	True	False	False
False	False	True	False

4. They are not congruent. One pair of corresponding sides is not congruent.

5. SAS can be used when two pairs of corresponding sides of a triangle are congruent and the included angles are also congruent.

6. 36°

7. C

8. My family room is quiet.

9. $\triangle RSC \cong \triangle EDC$

10. $x = 14, y = 5$

11. B

12. $(-3, 3)$

13.

Statements	Reasons
1. A lies on the perpendicular bisector of $\overline{BC}$	1. Given
2. $\overline{AD} = \overline{AD}$	2. Reflexive Property of Congruence
3. $\angle ADC \cong \angle ADB$	3. Perpendicular lines form congruent adjacent angles.
4. $\triangle ADB \cong \triangle ADC$	4. SAS Triangle Congruence
5. $\overline{AB} \cong \overline{AC}$	5. CPCTC
6. $AB = AC$	6. Definition of congruent segments

14. 1521 ft^2

15. 52°

16. 8 mi

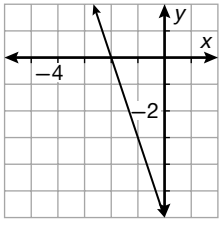
17. 40°

18.

Statements	Reasons
1. $m \parallel n$	1. Given
2. $\angle 1$ is supplementary to $\angle 3$	2. Linear pairs are supplementary.
3. $\angle 1 + \angle 3 = 180°$	3. Definition of supplementary angles
4. $\angle 3 \cong \angle 4$	4. If parallel lines are cut by a transversal, the corresponding angles are congruent.
5. $\angle 2 \cong \angle 4$	5. Vertical angles are congruent.
6. $\angle 1 + \angle 2 = 180°$	6. Substitute.
7. $\angle 1$ is supplementary to $\angle 2$	7. Definition of supplementary angles

19. 2,387,610 km

20.



21. right, scalene

22.

Statements	Reasons
1. *CDE* and *ABF* are parallel	1. Given
2. $\overline{AB}$ and $\overline{CD}$ do not intersect	2. Definition of parallel planes
3. $\overline{AB}$ and $\overline{CD}$ lie on *ABC*	3. Planes intersect in a line.
4. $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$	4. Definition of parallel lines

23. 340 yards of fence; 6600 yd^2

24. true

25. His answer is incorrect. The hypotenuse is always the longest side in a right triangle. His error was that he substituted 13 and 5 for *a* and *b*, and solved for *c*.

26. $x = 22$ cm and $y = 110$

27. no; $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \ldots$

28. Answers will vary. Any answer of the form $7n$, $24n$, $25n$ will be a Pythagorean triple, with n being a positive whole number.

29. sometimes true

30. 5 ft