

Warm Up 13

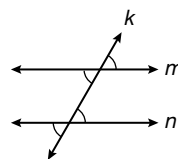
1. obtuse
2. 12.5
3. B

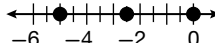
Lesson Practice 13

- a. $\triangle UVW$
- b. $\triangle XYZ$
- c. $\triangle RST$
- d. Yes, $\triangle XYZ$
- e. 45.1 cm
- f. 87.12 cm^2
- g. 3007 yd
- h. $359,177 \text{ yd}^2$

Practice 13

1. $\angle 2$ and $\angle 5$ or $\angle 3$ and $\angle 8$
2. Sample: If a triangle is equilateral, then the triangle is isosceles.
3. obtuse
4. It is not possible with three points. Four noncoplanar points can be drawn.
5. Sample: $n = 3$, $n^2 = 3^2 = 9$, $1 + 3 + 5 = 9$
6. 6.32
7. 4.47
8. $(1.5, 4)$ and $(1, -2.5)$
9. There is a chance of the conclusion being true, but not for the reasons given, so the conjecture is invalid.
10. No, because \overleftrightarrow{DE} is not parallel to \overleftrightarrow{KL} .
11. Converse of the Same-Side Interior Angles Theorem
12. D
13. isosceles; no
14. There is not enough data to determine who is correct, as there is no indication whether the numbers increase by adding 2 or by multiplying by 2.
15. C
16. An angle greater than 90° cannot be equal to an angle less than 90° .
17. If a person is born in the United States, then that person can have an American passport.
18. 5 ft
19. Sample:



20. Approximately 2845 panes
21. If a bird is pink, then it is a flamingo.
22. The two angles are congruent, as they are vertical angles.
23. always
24. a. $\triangle PQR$
b. $\triangle MNO$
c. $\triangle JKL$
25. a. -2.5
b. 
26. 17
27. 9
28. No, because none of the planes are parallel, it is impossible to know if their lines of intersection are parallel.
29. a. Angles 1 and 2 are congruent alternate interior angles, so by the Converse of the Alternate Interior Angles Theorem, the upper and lower girders are parallel.
b. Angles 1 and 3 are supplementary; Show that angles 2 and 3 are also supplementary, then use the Converse of the Same-Side Interior Angles Theorem.
30. If x were 5, the angle would be a right angle. Since acute angles need to have smaller measures than right angles, but larger measures than zero degrees,
 $0 < 12x + 30 < 90$.
 Solving for x gives $-2.5 < x < 5$.