11. $4.1\overline{6}$ or $4\frac{1}{6}$

12. $w = 6$ cm, $x = 4.5$ cm, $y = 7.5$ cm, $z = 3$ cm

13. $x = 4\frac{1}{6}$ cm, $y = 7\frac{1}{2}$ cm

14. *XWV* By Alternate Interior Angles, $\angle T \cong \angle X$ and $\angle U \cong \angle W$, so the triangles are similar by AA Similarity.

15. Yes. The angles are congruent and the sides are proportional.

16. 21 feet

17. 13 ft 2 in.

20. Yes. If two triangles are congruent, then corresponding angles are congruent and corresponding sides are proportional with ratio $\frac{1}{1}$, so the triangles are similar.

22. Since they share $\angle M$ and both triangles have a right angle, the triangles are similar by the AA Similarity conjecture.

$h = 6.72$

23. $\triangle LPR \sim \triangle TPU$ by AA. $x = 24$

25. 15

26. $x = 4$; The Proportional Parts conjecture tells us that the median is also proportional. Since the sides are all proportional. $\triangle ABD \sim \triangle EFH$ and $\triangle BDC \sim \triangle FHG$.

27. $w = 32$, $x = 24$, $y = 40$, $z = 126$