LESSON 9.1

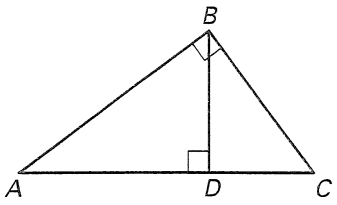
NAME _____ DATE _____

Practice C

For use with pages 527–534

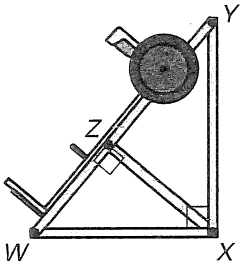
Lesson 9.1

Use the diagrams at the right to find the indicated length.



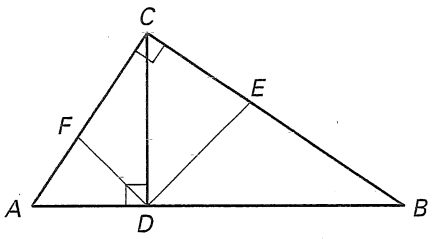
1. $AD = 16, DB = 12, DC =$?
2. $AB = 20, AD = 16, AC =$?
3. $AD = 16, DC = 2, BC =$?
4. $DC = 4, BC = 6, AC =$?
5. $AD = 25, DB = 10, DC =$?
6. $AD = 4, DC = 1, DB =$?

In Exercises 7–9, use the diagram of the squat machine where $ZY = 36$ in. and $ZW = 24$ in.



7. Find the length of the vertical support bar, XY.
8. Find the length of the base bar, WX.
9. Find the length of the cross bar, XZ.

In Exercises 10–14, use the given information.



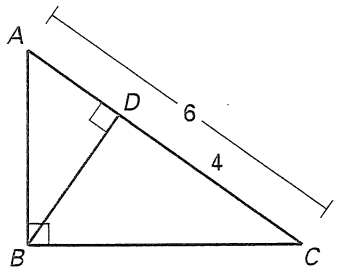
Given: $\triangle ABC$ is a right triangle with $m\angle C = 90°$, $\overline{DC} \perp \overline{AB}$, $\overline{FD}$ bisects $\angle ADC$, $\overline{ED}$ bisects $\angle BDC$

10. Which angles are congruent?
11. Which triangles are similar?
12. *True* or *False*? $\frac{AD}{CD} = \frac{AC}{BC}$
13. Is $\overline{DF}$ an altitude of $\triangle ADC$?
14. *True* or *False*? $\frac{CE}{CB} = \frac{CF}{CA}$

Write a two-column proof or a paragraph proof.

15. **Given:** $\triangle ABC$ with altitude $\overline{BD}$, $m\angle ABC = 90°$, $AC = 6, DC = 4$

Prove: $BC = 2\sqrt{6}$



16. **Given:** $\triangle JKL$ with altitude $\overline{KM}$, $m\angle LKJ = 90°$, $KM = 3, KJ = 5$

Prove: $JL = \frac{25}{4}$