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Unit 6- Worksheet \#5- Use Proportion Theorems
Use the figure to complete the proportion.

1. $\frac{G C}{C F}=\frac{?}{D B}$
2. $\frac{A F}{F C}=\frac{?}{B D}$
3. $\frac{C D}{F B}=\frac{G D}{?}$
4. $\frac{A E}{C D}=\frac{G E}{?}$
5. $\frac{F G}{A G}=\frac{F B}{?}$
6. $\frac{G D}{G E}=\frac{?}{A E}$


Find the length of $\overline{A B}$. Show your work.
7.

8.


Use the given information to determine whether $\overline{B D} \| \overline{A E}$. Show your work.
9.

10.

11.

12.

13. For the figure below, which statement is not necessarily true?

(A) $\frac{P Q}{Q R}=\frac{U T}{T S}$
(B) $\frac{T S}{U T}=\frac{Q R}{P Q}$
(C) $\frac{Q R}{R S}=\frac{T S}{R S}$
(D) $\frac{P Q}{P R}=\frac{U T}{U S}$

Find the value of each length. Show your work.

14. $B C$
15. $F C$
16. $G B$
17. $C D$

Find the value of the variable. Show your work.
18.

19.

20.

21.

22.

23. A student begins to solve for the length of $\overline{A D}$ as shown. Describe and correct the student's error.

24. A student claims that $A B=A C$ using the method shown. Describe and correct the student's error.

$$
\frac{B D}{C D}=\frac{A B}{A C} \cdot \text { Because } B D=C D \text {, }
$$

$$
\text { it follows that } A B=A C \text {. }
$$



