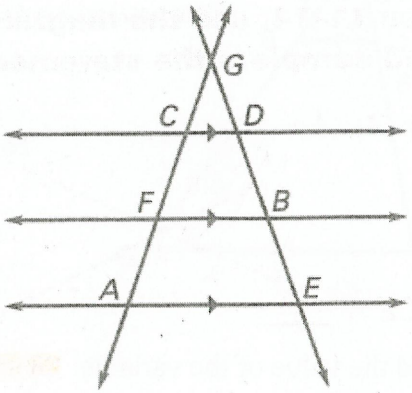
Geometry- Mrs. Tilus
Unit 6- Worksheet #5- Use Proportion Theorems

Name: Answer Key

Use the figure to complete the proportion.

1. $\frac{GC}{CF} = \frac{?}{DB}$? = GD

2. $\frac{AF}{FC} = \frac{?}{BD}$? = EB



3. $\frac{CD}{FB} = \frac{GD}{?}$? = GB

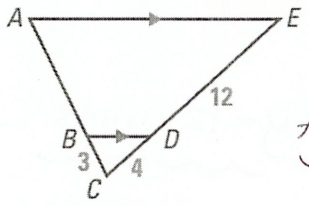
4. $\frac{AE}{CD} = \frac{GE}{?}$? = GD

5. $\frac{FG}{AG} = \frac{FB}{?}$? = AE

6. $\frac{GD}{GE} = \frac{?}{AE}$? = CD

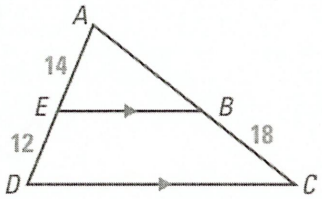
Find the length of $\overline{AB}$. Show your work.

7.



AB = 9units

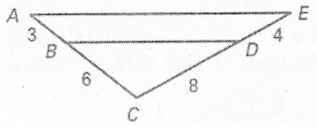
8.



AB = 21units

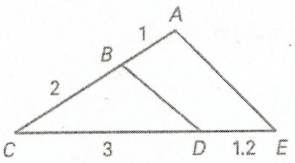
Use the given information to determine whether $\overline{BD} \parallel \overline{AE}$. Show your work.

9.



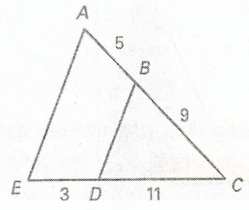
Yes; $\overline{BD} \parallel \overline{AE}$

10.



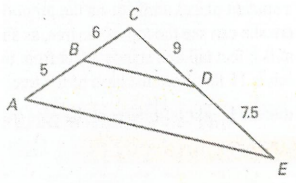
No; $\overline{BD} \not\parallel \overline{AE}$

11.



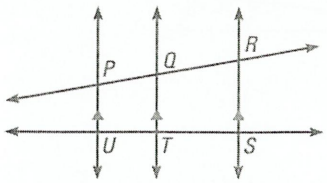
No; $\overline{BD} \not\parallel \overline{AE}$

12.



Yes; $\overline{BD} \parallel \overline{AE}$

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



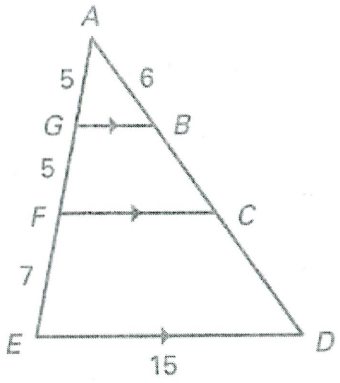
(A) $\frac{PQ}{QR} = \frac{UT}{TS}$

(B) $\frac{TS}{UT} = \frac{QR}{PQ}$

(C) $\frac{QR}{RS} = \frac{TS}{RS}$

(D) $\frac{PQ}{PR} = \frac{UT}{US}$

Find the value of each length. Show your work.



14. BC = 6 units

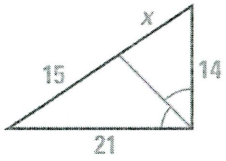
15. FC = 8.8 units

16. GB = 4.4 units

17. CD = 8.4 units

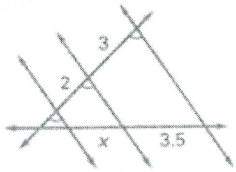
Find the value of the variable. Show your work.

18.



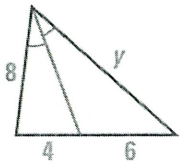
x = 10 units

19.



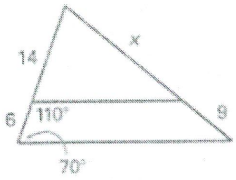
$x = 2.\overline{3}$ units

20.



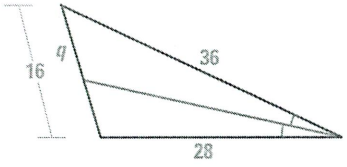
y = 12 units

21.



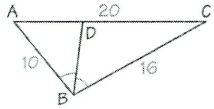
x = 21 units

22.



q = 9 units

23. A student begins to solve for the length of $\overline{AD}$ as shown. **Describe** and **correct** the student's error. CD ≠ 20



$\frac{AB}{BC} = \frac{AD}{CD}$ $\frac{10}{16} = \frac{20 - x}{20}$

24. A student claims that $AB = AC$ using the method shown. **Describe** and **correct** the student's error.

$\frac{BD}{CD} = \frac{AB}{AC}$. Because BD = CD, it follows that AB = AC.

* Angle *