

Chapter Test

1. Two sides of a rectangle have the lengths 20 and 32. Find, in simplest form, the ratio of:
- the length of the shorter side to the length of the longer side
 - the perimeter to the length of the longer side

2. If quad. $ABCD \sim$ quad. $THUS$, then: a. $\angle U \cong$? b. $\frac{BC}{HU} = \frac{AD}{?}$

3. If $x:y:z = 4:6:9$ and $z = 45$, then $x =$? and $y =$?.

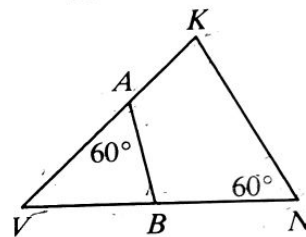
4. If $\frac{8}{9} = \frac{x}{15}$, then $x =$?.

5. If $\frac{a}{b} = \frac{c}{10}$, then $\frac{a+b}{?} = \frac{?}{10}$.

6. What postulate or theorem justifies the statement $\triangle AVB \sim \triangle NVK$?

7. $\frac{AB}{NK} = \frac{VA}{?}$

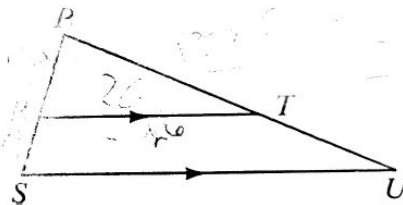
8. The scale factor of $\triangle AVB$ to $\triangle NVK$ is $\frac{5}{8}$. If $VA = 2.5$ and $VB = 1.7$, then $VN =$?.



9. If $PR = 10$, $RS = 6$, and $PT = 15$, then $TU =$?.

10. If $PT = 32$, $PU = 48$, and $RS = 10$, then $PR =$?.

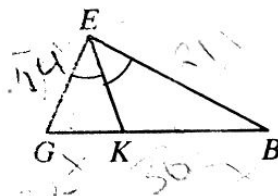
11. If $PR = 14$, $RS = 7$, and $RT = 26$, then $SU =$?.



In $\triangle GEB$, the bisector of $\angle E$ meets \overline{GB} at K .

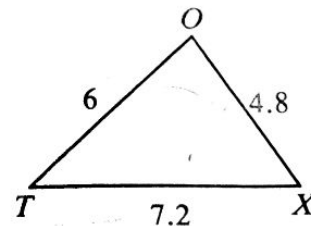
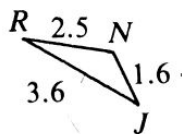
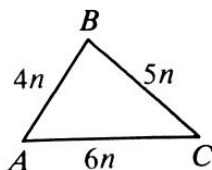
12. If $GK = 5$, $KB = 8$, and $GE = 7$, then $EB =$?.

13. If $GE = 14$, $EB = 21$, and $GB = 30$, then $GK =$?.

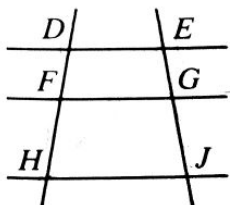


14. Given the triangles shown, state a similarity:

$\triangle \underline{\quad} \sim \triangle \underline{\quad}$.



15. Given: $\overrightarrow{DE} \parallel \overrightarrow{FG} \parallel \overrightarrow{HJ}$
Prove: $DF \cdot GJ = FH \cdot EG$



Handwritten notes for question 15: $\frac{DF}{FH} = \frac{EG}{GJ}$, $DF \cdot GJ = FH \cdot EG$, $\frac{15}{8} = \frac{15}{8}$, $\frac{15}{20}$

16. Given: $BX = 6$; $AX = 8$;
 $CX = 9$; $DX = 12$

Prove: $\overline{AB} \parallel \overline{CD}$

