Similar Figures—Word Problems

1. P and Q are points on AB and BC respectively of $\triangle ABC$. $PQ \parallel AC$. $AC = 18$ cm, $AP = 4$ cm and $PB = 12$ cm. Find PQ. _____

2. The sides of a quadrilateral are 12′, 18′, 20′, and 16′. The longest side of a similar quadrilateral is 6′. Find the remaining sides. _____

3. The corresponding sides of two similar figures are 12″ and 21″. Find the ratio of their perimeters. _____

4. A triangle has sides of 6″, 4″ and 7″. The shortest side of a similar triangle is 12″. Find the perimeter. _____

5. In $\triangle ABC$, P is on AB and Q is on AC. $\angle APQ = \angle C$. If $AB = 40'$, $AC = 32'$, and $CQ = 6'$, find PB. _____

6. In a 30° – 60° – 90° triangle, the shortest side is 15″. A similar triangle is four times as large. Find the longest side of the similar triangle. _____

7. A field has the dimensions 375 yd, 425 yd, 275 yd and 300 yd. A plot plan is drawn to scale where 1″ represents 25 yd. Find the dimensions of the plot plan.

8. In $\triangle ABC$, points P and Q are on AB and AC respectively. $\angle AQP = \angle B$. If $AB = 24''$, $AQ = 8''$, $CQ = 22''$, and $PQ = 12''$, find AP, PB, and BC. _____

9. Lines AB and CD intersect at E. AC is drawn parallel to BD. If $AE = 9'$, $EC = 15'$, and $BE = 12'$, find DE. _____

10. In $\triangle ABC$, D is on AB and E is on AC. $DE \parallel BC$. $AC = 20$ cm, $AE = 6$ cm, $BC = 24$ cm, and $AD = 8$ cm. Find DE and AB. _____

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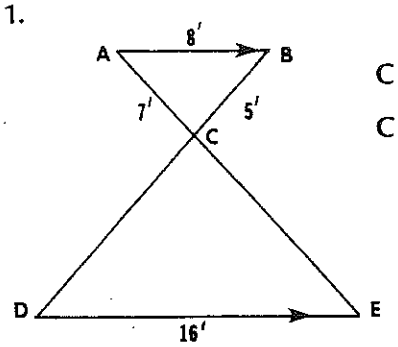
Finding Measurements in Similar Figures

Find the indicated sides.

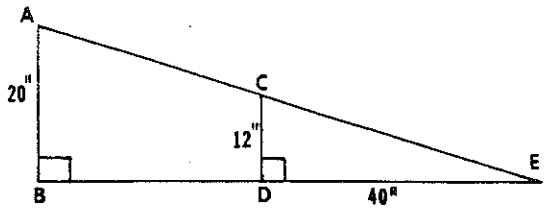
1.



CD = _____

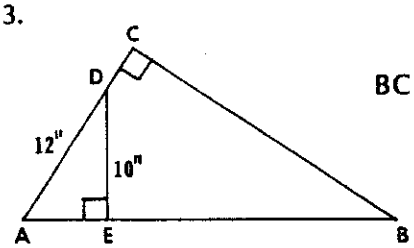
CE = _____

2.



BE = _____

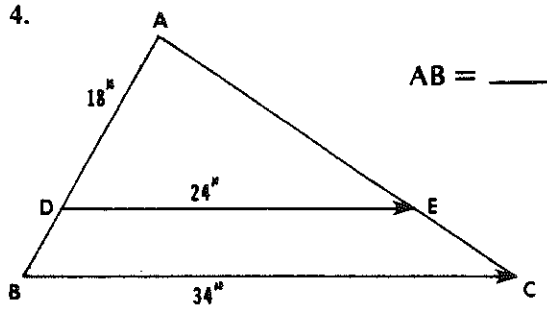
3.



BC = _____

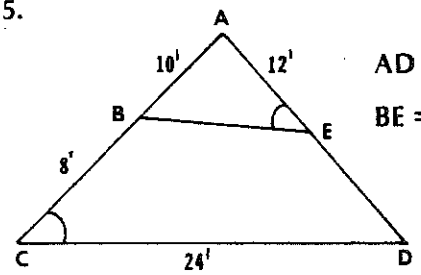
_____ 36" _____

4.



AB = _____

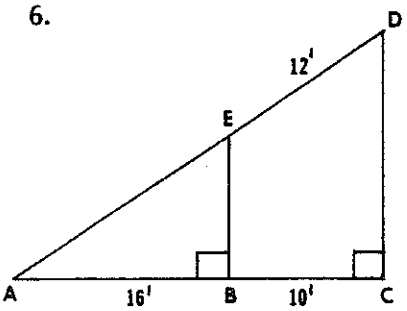
5.



AD = _____

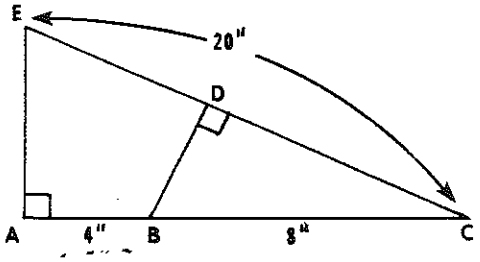
BE = _____

6.



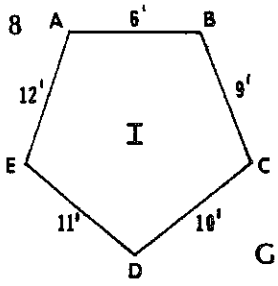
AD = _____

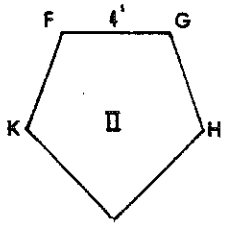
7.



CD = _____

8





GH = _____ JK = _____

HJ = _____ KF = _____

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