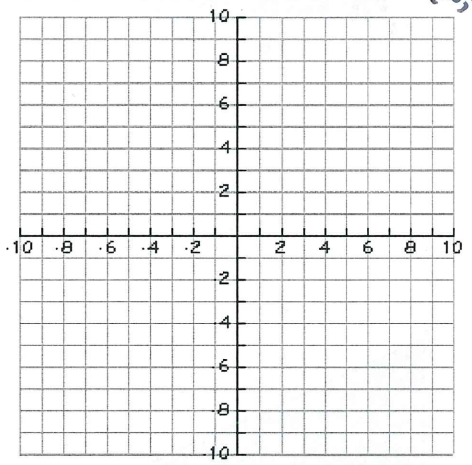
Name: _____ Period: _____

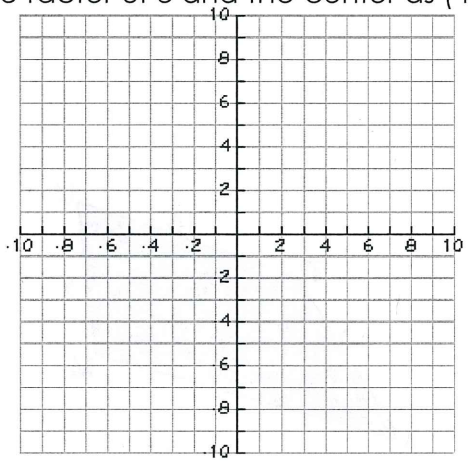
CCGPS Analytic Geometry
Unit 2B Practice

Part 1: Dilations

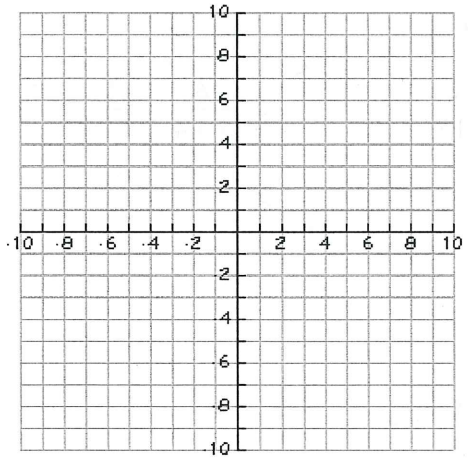
1. Plot the triangle A (4, 3) B(1, 1) C(-1, 5). Then graph the dilated image of ABC using the scale factor of 2 and the center as (2,5)



2. Plot the triangle A (6, -4) B(4, -2) C(1, -6). Then graph the dilated image of ABC using the scale factor of 3 and the center as (4, -5).



3. Plot the triangle A (0, 2) B(8, -4) C(-8, -8). Then graph the dilated image of ABC using the scale factor of 1/2 and the center as (-4, 10).



Part 2: Similarity

1. MATH ~ KIDS

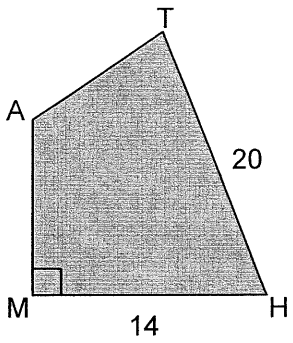
(a) ratio = _____

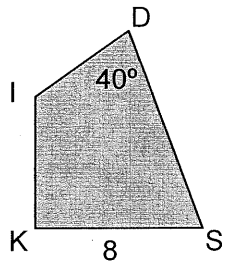
(b) m∠K = _____

(c) m∠T = _____

(d) Scale factor = _____

(f) DS = _____





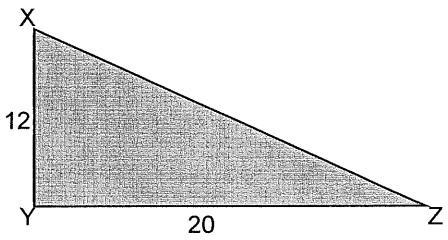
2. ABC ~ XYZ

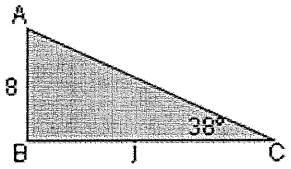
(a) Scale factor = _____

(b) Ratio = _____

(b) j = _____

(c) m∠Z = _____





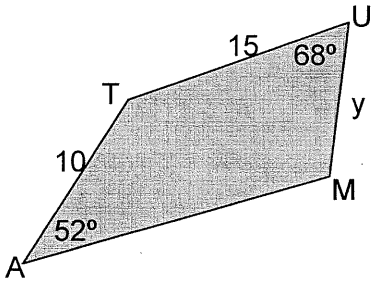
3. Quad. TAMU ~ Quad. T'A'M'U'

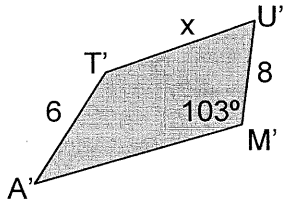
(a) Scale factor = _____

(b) x = _____

(c) y = _____

(d) ratio = _____





Solve the following proportions for x.

4. $\frac{8}{x} = \frac{12}{x+6}$

5. $\frac{x}{8} = \frac{6}{15}$

6. $\frac{6}{x+4} = \frac{5}{x-7}$

7. $\frac{5}{2x-7} = \frac{13}{x-3}$

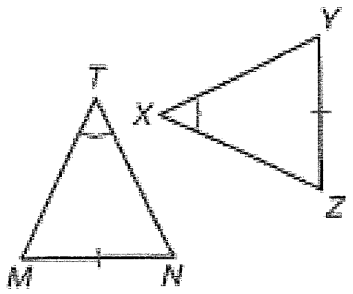
Solve the following.

8. The perimeter of a rectangle is 40 feet. The ratio of the width to the length is 2:3. Find the length and width.

9. The perimeter of a rectangle is 126 feet. The ratio of the width to the length is 3:4. Find the length and width.

Determine if the triangles are similar. State the reason.

4.



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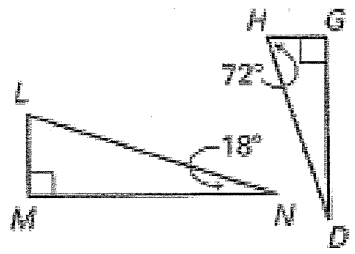

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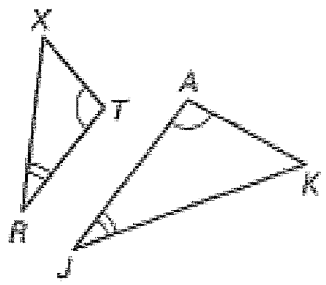

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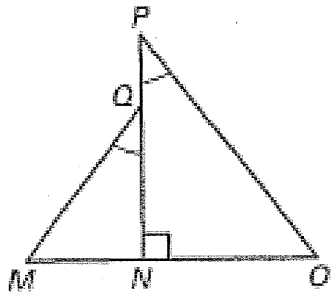

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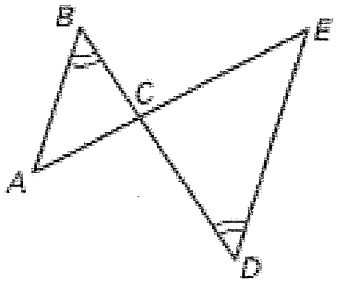

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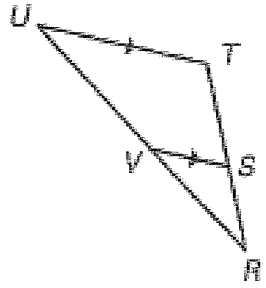
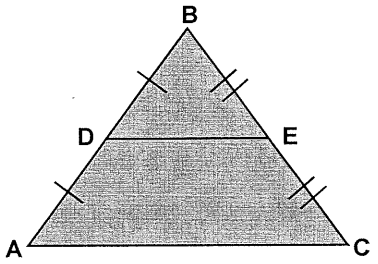


Part 3: Midsegment

1. If AC = 30, then DE = _____.

2. If DE = 5, then AC = _____.

3. If DE = x + 6 and AC = 3x + 4, then x = _____.



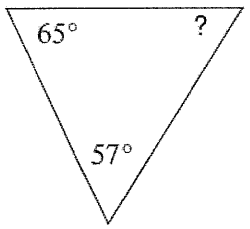
4. If DE = x + 2 and AC = 5x – 23, then x = _____.

5. If DE = 3x – 1 and AC = 3x – 8, then x = _____.

Part 4: Interior and Exterior Angles

Find the missing angles for the following problems.

1.



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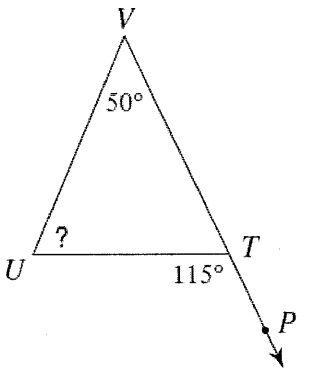

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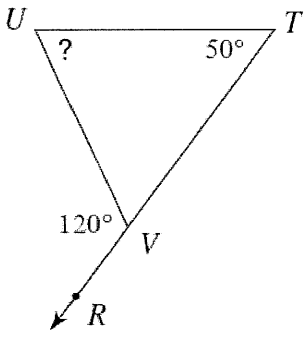

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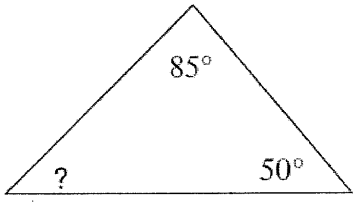

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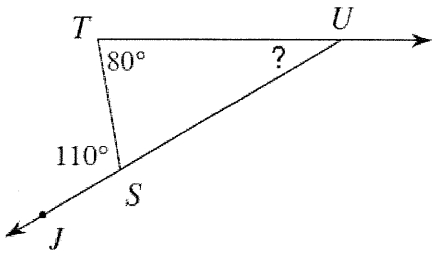

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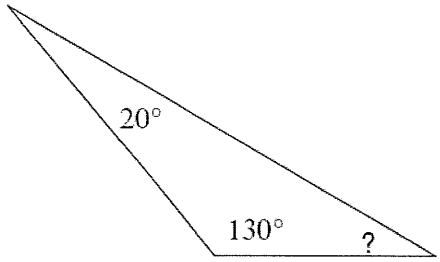

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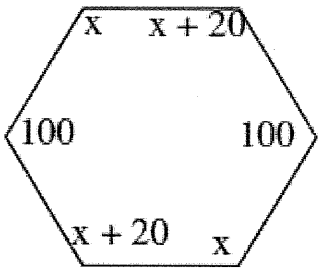

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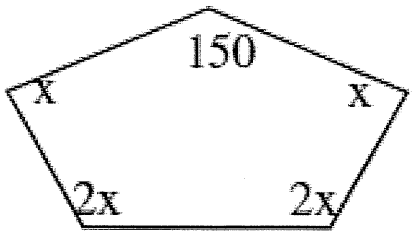

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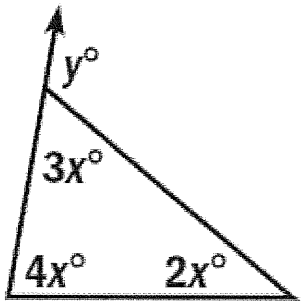

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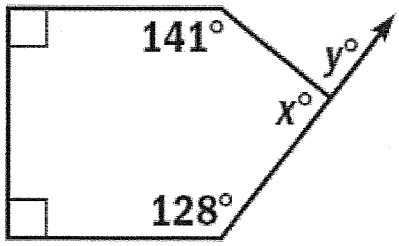

11. Find the sum of the interior angles for the following polygons. Then find the measure of one interior angle, assuming they are all regular.

    a. 20-gon

    b. 24-gon

    c. 67-gon

    d. 32-gon