Int Math Name_____

Sem2 Integrated Math PRACTICE Final (ver1)

Date_____ Period____

Round each to the place indicated.

1) 8.77254

2) 5.586796

3) 6.679871

4) 7.65

5) 2.159249

6) 4.167; hundredths

7) 1.9283; thousandths

8) 3.879160; thousandths

9) 8.6764; hundredths

10) 5.81736; ten-thousandths

Simplify.

11) $\sqrt{32}$

12) $\sqrt{50}$

13) $6\sqrt{27}$

14) $3\sqrt{24}$

15) $-3\sqrt{4} \cdot -4\sqrt{3}$

16) $\sqrt{2} \cdot 3\sqrt{6}$

17) $-4\sqrt{3} \cdot 3\sqrt{2}$

18) $10\sqrt{3} - 8\sqrt{3}$

19) $11\sqrt{7} - 10\sqrt{7}$

20) $11\sqrt{20} + 8\sqrt{20}$

21) $-\sqrt{12} - 2\sqrt{12}$

22) $2\sqrt{3} - 2\sqrt{12}$

23) $\frac{\sqrt{2}}{\sqrt{32}}$

24) $\frac{\sqrt{3}}{\sqrt{75}}$

25) $\frac{\sqrt{15}}{\sqrt{48}}$

26) $\frac{\sqrt{5}}{\sqrt{3}}$

Solve each equation. Remember to check for extraneous solutions.

27) $\sqrt{8 - 7n} - 2 = 6$

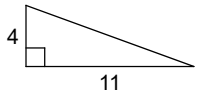
28) $6 + \sqrt{36n} = 12$

29) $-8 = -4\sqrt{-4 - 2n}$

30) $\sqrt{3x} = \sqrt{4 - x}$

Find each missing length to the nearest tenth.

31)



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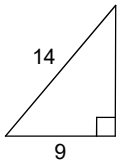

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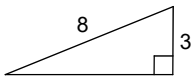

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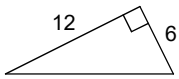


35) $a = ?,\ b = 6,\ c = 12$

36) $a = 12,\ b = 4,\ c = ?$

Do the following lengths form a right triangle?

37) $a = 1,\ b = 2.4,\ c = 2.6$

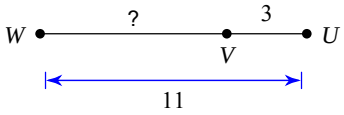
38) $a = 4,\ b = 9.6,\ c = 9.7$

39) $a = 3.6,\ b = 7.7,\ c = 8.5$

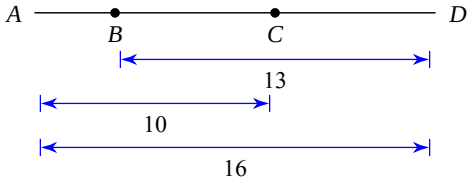
40) $a = 4.4,\ b = 11.7,\ c = 12.4$

Find the length indicated.

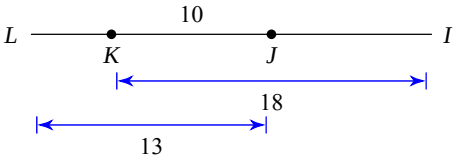
41)



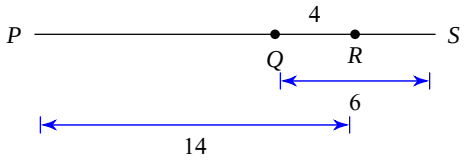
42) Find BC



43) Find LI

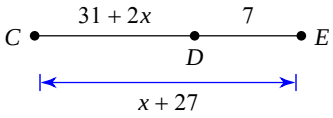


44) Find PS

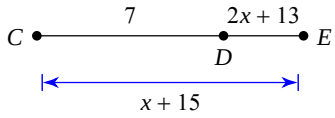


Solve for x.

45)



46)



Find the length indicated :

47) Find BC if $AC = 16$, $BC = 2x - 3$, and $AB = x + 1$.

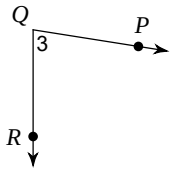
48) Find BC if $BC = 4x - 1$, $AC = 11$, and $AB = 7x + 1$.

49) $AC = 2x - 2$, $BC = x + 3$, and $AB = 1$. Find AC.

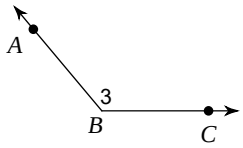
50) $BC = 10$, $AB = 2x - 1$, and $AC = 3 + 4x$. Find AB.

Name each angle in four ways.

51)

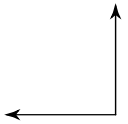


52)

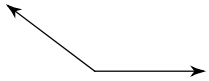


Classify each angle as acute, obtuse, right, or straight.

53)



54)



55) 52°

56) 75°

57) 117°

58) 90°

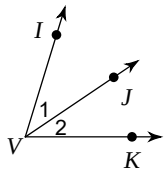
Draw and label an angle to fit each description.

59) a straight angle, $\angle GHI$

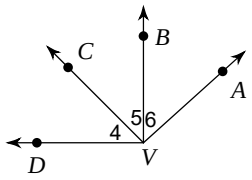
60) an acute angle, $\angle YXW$

Name all the angles that have *V* as a vertex.

61)

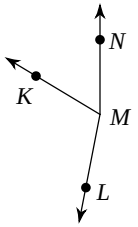


62)

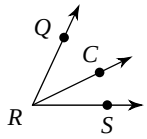


Find the measure of the angle indcated.

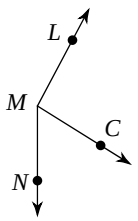
63) Find $m\angle LMK$ if $m\angle LMN = 169°$ and $m\angle KMN = 59°$.



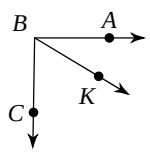
64) Find $m\angle CRS$ if $m\angle QRC = 39°$ and $m\angle QRS = 65°$.



65) Find $m\angle LMC$ if $m\angle CMN = 58°$, $m\angle LMC = 11x + 6$, and $m\angle LMN = 19x$.

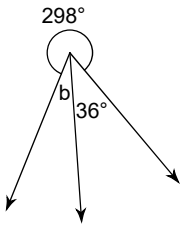


66) $m\angle ABK = 6x - 5$, $m\angle ABC = 16x - 5$, and $m\angle KBC = 60°$. Find $m\angle ABK$.

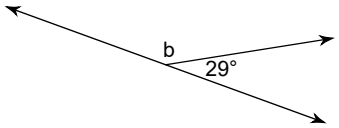


Find the measure of angle b.

67)

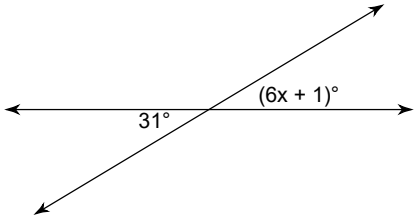


68)

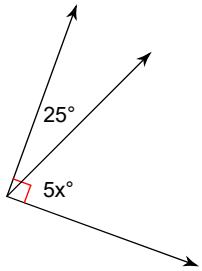


Find the value of x.

69)

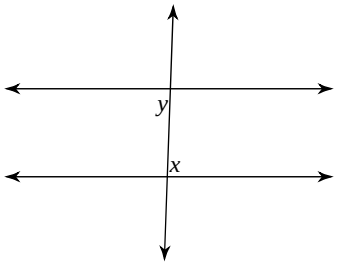


70)

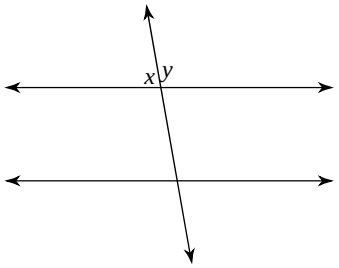


Identify each pair of angles as CORRESPONDING, ALTERNATE INTERIOR, ALTERNATE EXTERIOR, SAME-SIDE INTERIOR, VERTICAL, or ADJACENT (linear pair).

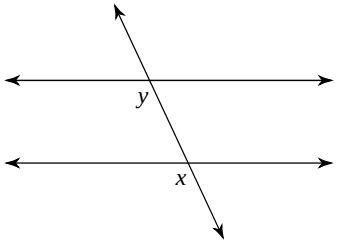
71)



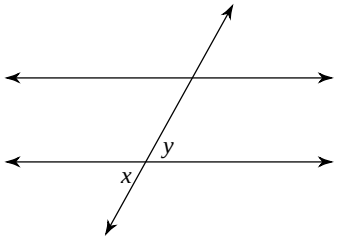
72)



73)

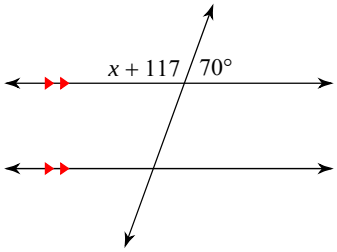


74)

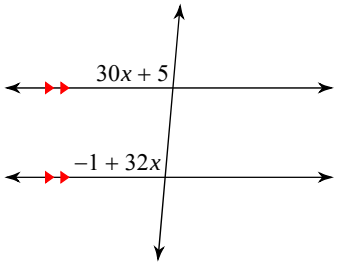


Solve for *x*.

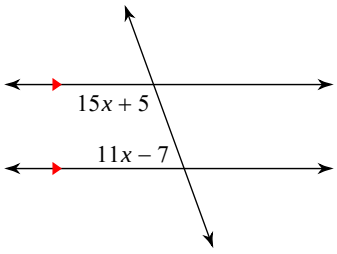
75)



76)



77)



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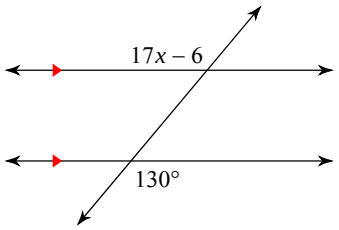
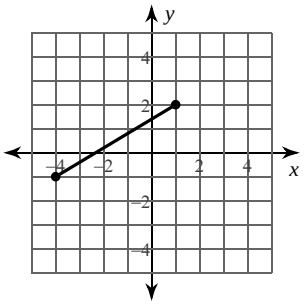


Find the distance between each pair of points. Round your answer to the nearest tenth, if necessary.

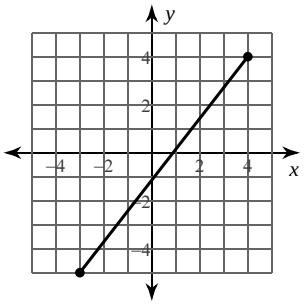
79) $(8, -3),\ (-3, 3)$

80) $(-5, -8),\ (-6, 2)$

81)



82)

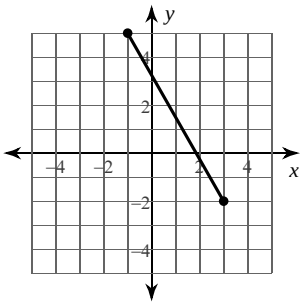


Find the midpoint of the line segment with the given endpoints.

83) $(-7, -1),\ (-7, 3)$

84) $(-3, -4),\ (7, -7)$

85)



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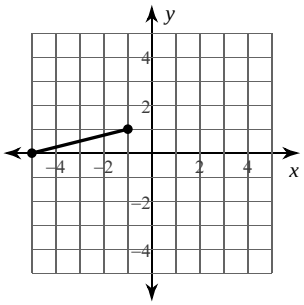
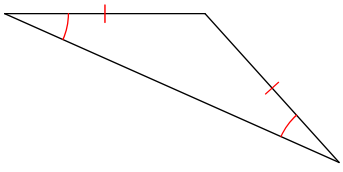


Classify each triangle by its angles and sides.

87)



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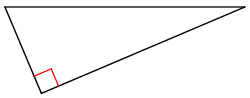

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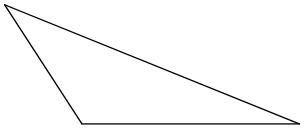

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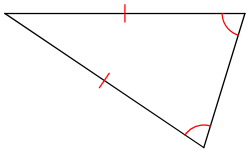

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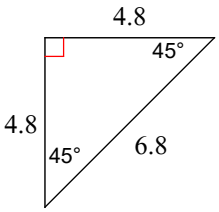

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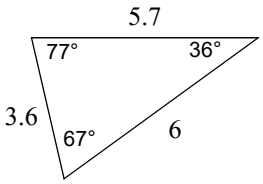

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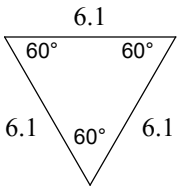
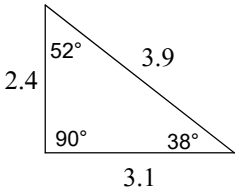
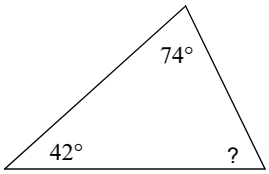


94)

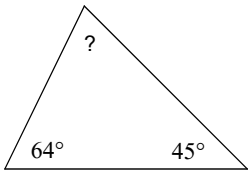


Find the measure of each angle indicated:

95)

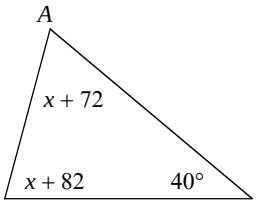


96)

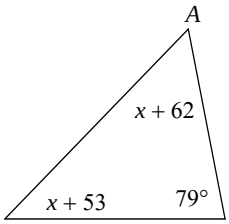


Find the measure of angle A.

97)

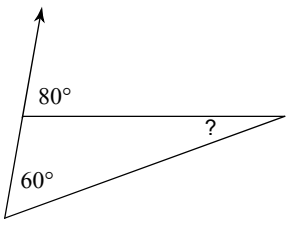


98)

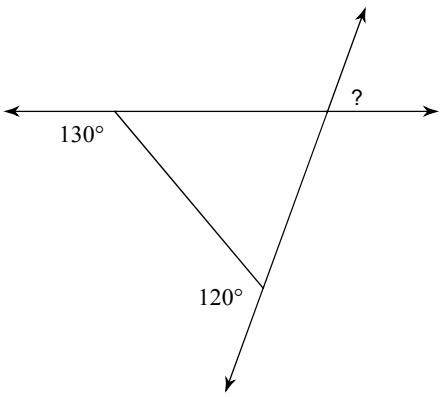


Find the measure of each angle indicated.

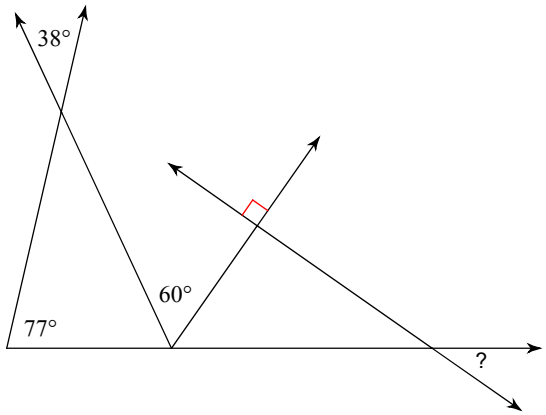
99)



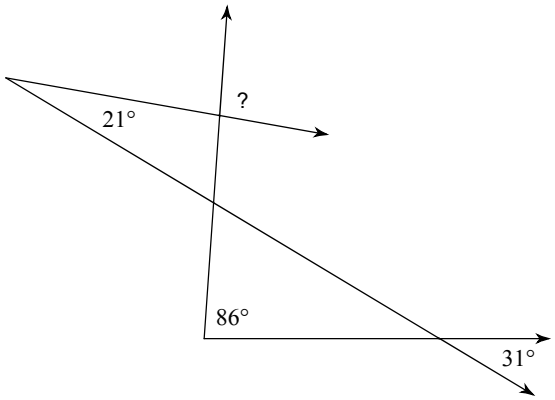
100)



101)

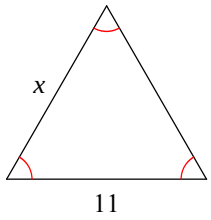


102)

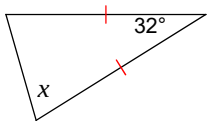


Find the value of *x*:

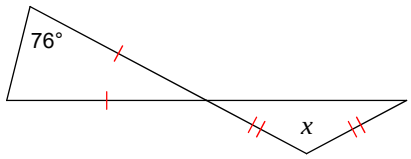
103)



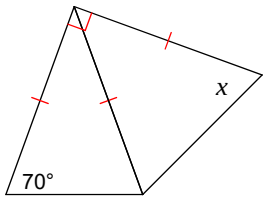
104)



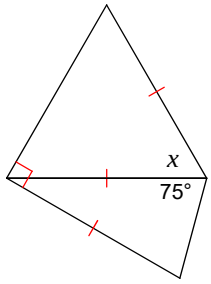
105)



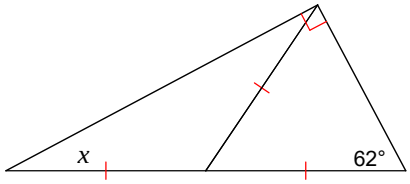
106)



107)

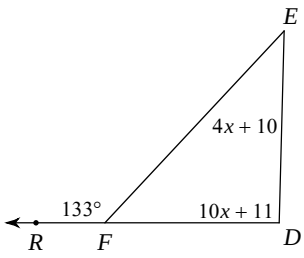


108)

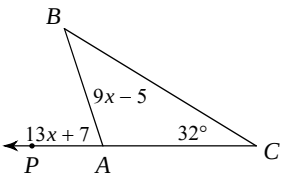


Solve for *x*

109)

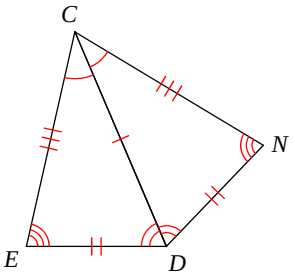


110)



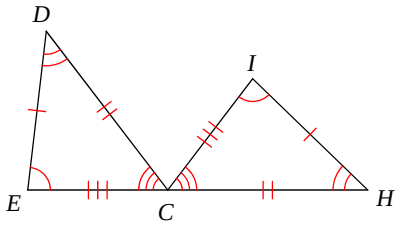
Complete each congruence statement by naming the corresponding angle or side.

111) $\triangle CDE \cong \triangle CDN$



$\overline{CD} \cong ?$

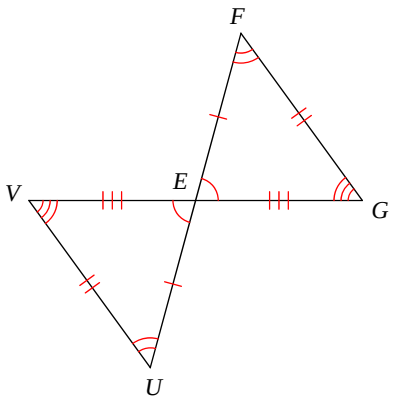
112) $\triangle EDC \cong \triangle IHC$



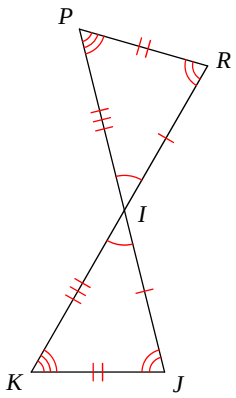
$\angle DCE \cong ?$

Write a statement that indicates that the triangles in each pair are congruent.

113)

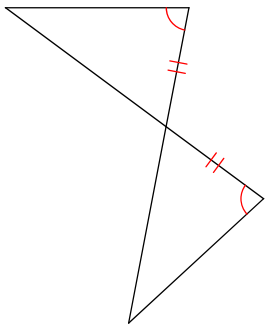


114)

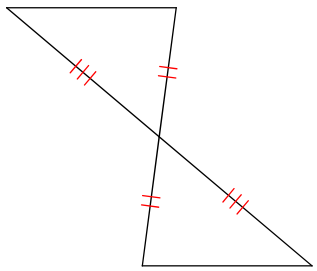


State if the two triangles are congruent. Write SSS, SAS, ASA, AAS, or NOT CONGRUENT

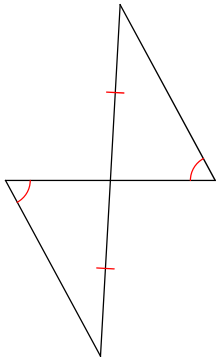
115)



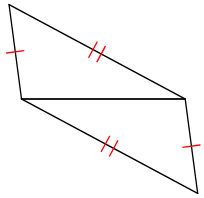
116)



117)

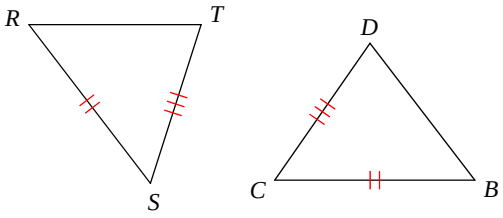


118)

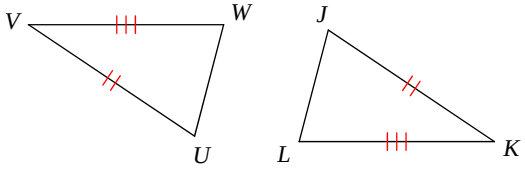


State what additional information is required in order to know that triangles are congruent for reason given.

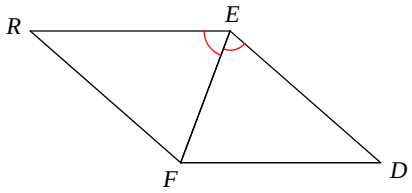
119) SAS



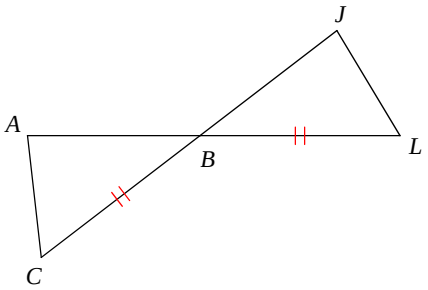
120) SAS



121) ASA

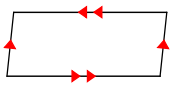


122) AAS

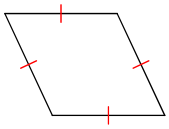


State the most specific name for each figure.

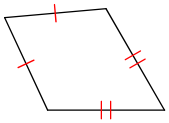
123)



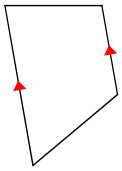
124)



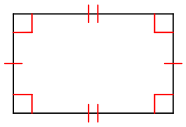
125)



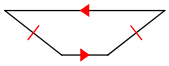
126)



127)

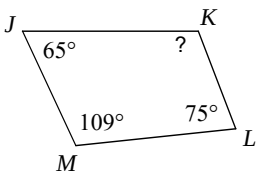


128)

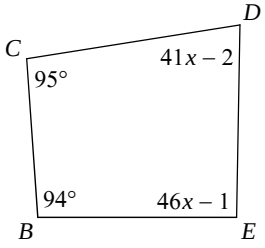


Find the measure of each angle indicated:

129)

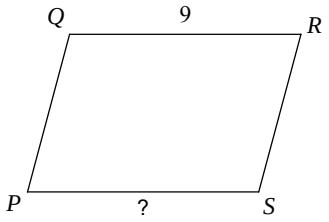


130) $m\angle E$

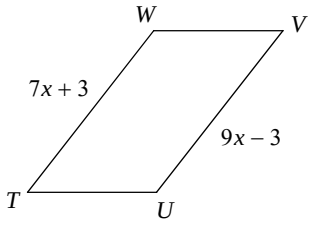


Find the measurement indicated in each PARALLELOGRAM.

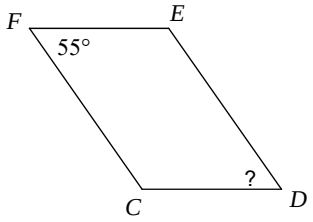
131)



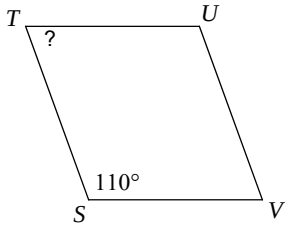
132) Find VU



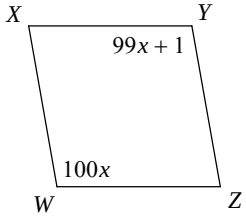
133)



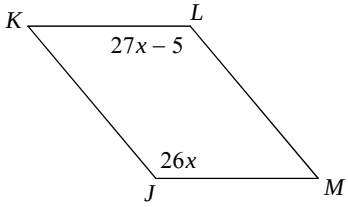
134)



135) Find $m\angle W$

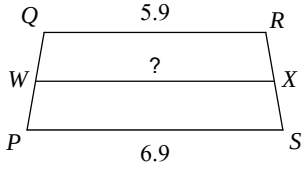


136) Find $m\angle K$

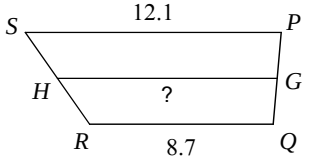


Find the length of the MEDIAN of each trapezoid.

137)

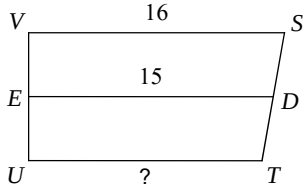


138)

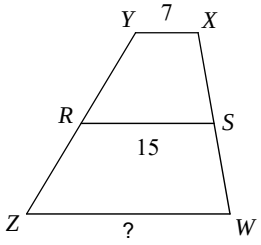


Find the length of the BASE indicated for each trapezoid.

139)

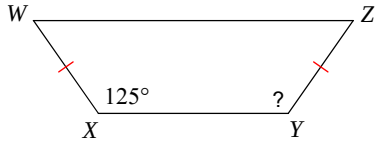


140)

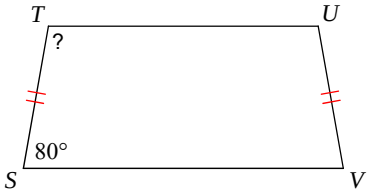


Find the measurement of the angle indicated for each trapezoid.

141)

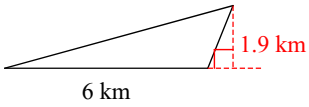


142)

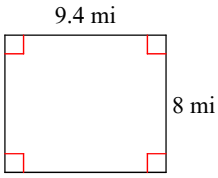


Find the area of each.

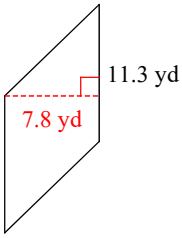
143)



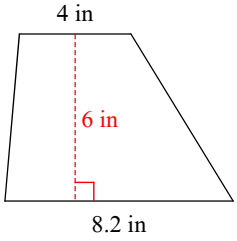
144)



145)

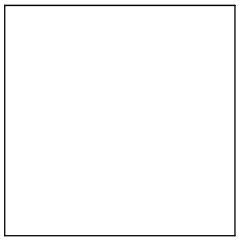


146)

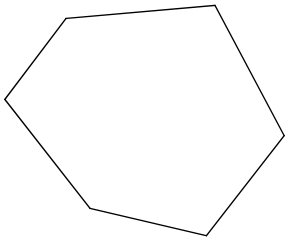


State if each polygon is regular or not.

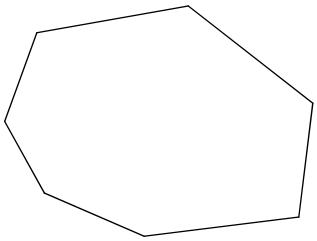
147)



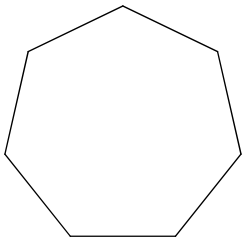
148)



149)

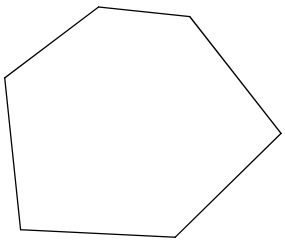


150)

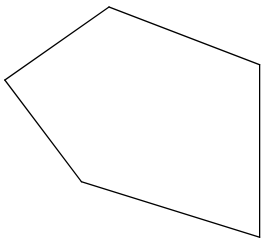


Write the name of each polygon.

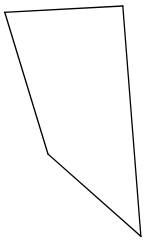
151)



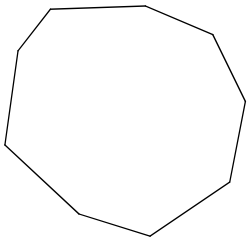
152)



153)

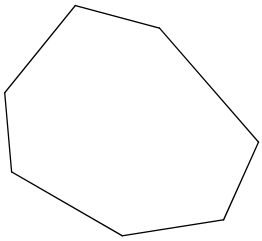


154)

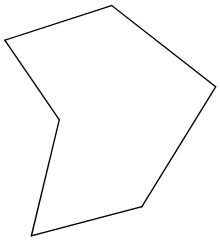


State if each polygon is concave or convex.

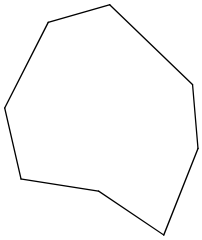
155)



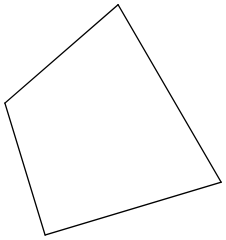
156)



157)

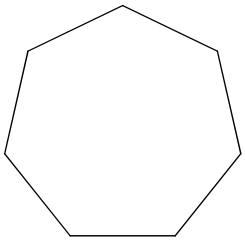


158)



Find the INTERIOR ANGLE SUM for each polygon. Round answer to the nearest tenth if necessary.

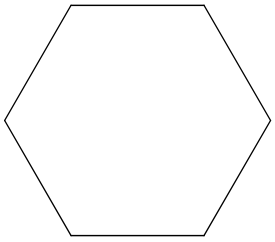
159)



160) regular 23-gon

Find the measure of ONE INTERIOR ANGLE in each polygon. Round answer to the nearest tenth.

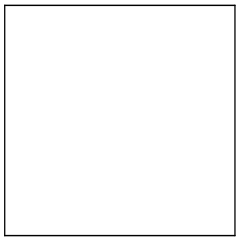
161)



162) regular 15-gon

Find the measure of ONE EXTERIOR ANGLE in each polygon. Round answer to the nearest tenth.

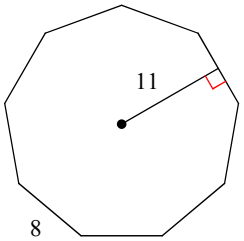
163)



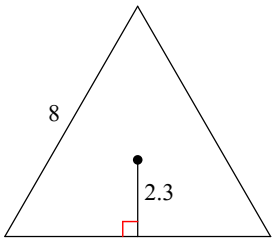
164) regular 21-gon

Find the AREA of each regular polygon. Round your answer to the nearest tenth if necessary.

165)



166)

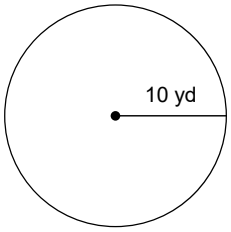


167) nonagon
apothem = 11
side = 8

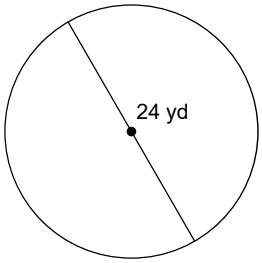
168) 7-gon
apothem = 8.3
side = 8

Find the AREA of each. Round your answer to the nearest tenth.

169)



170)

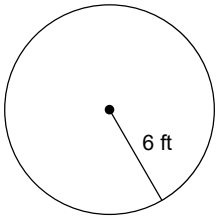


171) diameter = 19.4 km

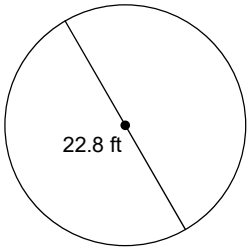
172) circumference = 31.4 ft

Find the CIRCUMFERENCE of each circle. Round your answer to the nearest tenth.

173)



174)



175) radius = 5.6 in

176) area = 91.6 in²

Find the RADIUS of each circle. Round your answer to the nearest tenth.

177) area = 295.6 km²

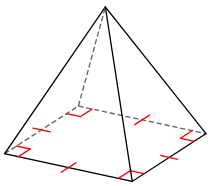
178) circumference = 23.9 km

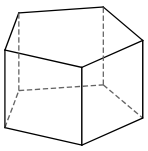
Find the DIAMETER of each circle. Round your answer to the nearest tenth.

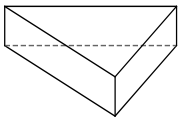
179) area = 40.7 km²

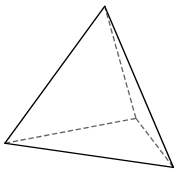
180) circumference = 49.6 m

Name each figure.

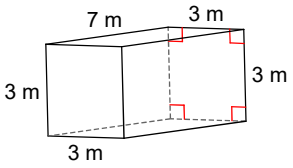
181) 

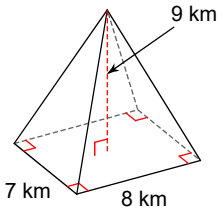
182) 

183) 

184) 

Find the VOLUME of each figure. Round your answers to the nearest tenth, if necessary.

185) 

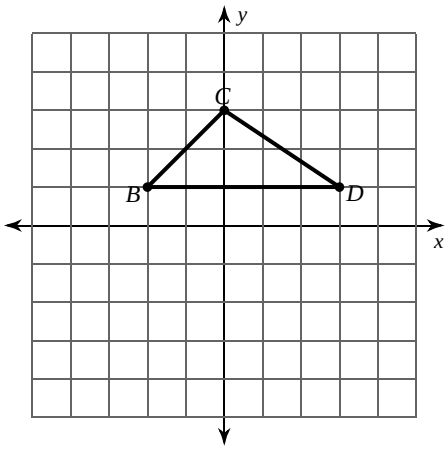
186) 

187) A cone with radius 8 ft and a height of 16 ft.

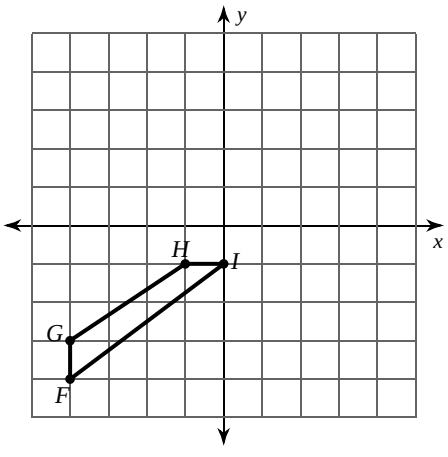
188) A cylinder with a diameter of 2 km and a height of 3 km.

Graph the image of the figure using the transformation given.

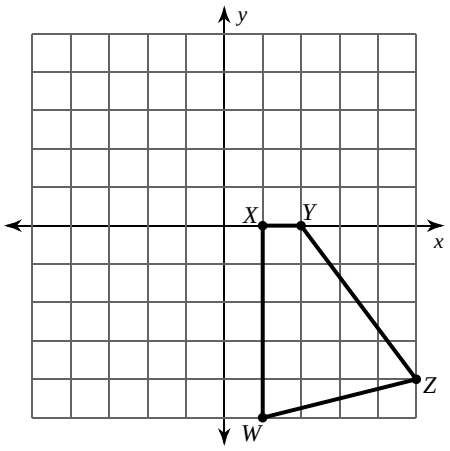
189) translation: 2 units right



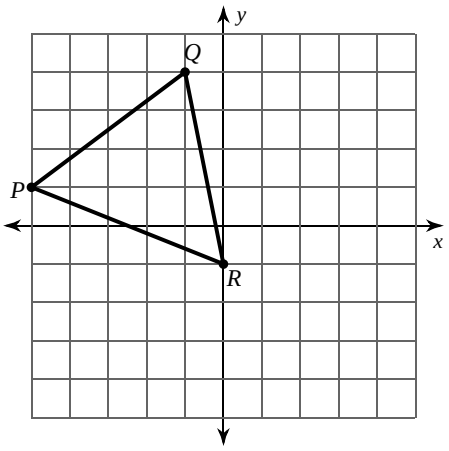
190) translation: 1 unit left and 3 units up



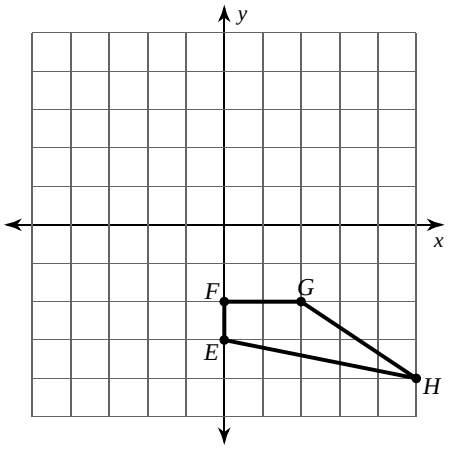
191) translation: $(-5, 1)$



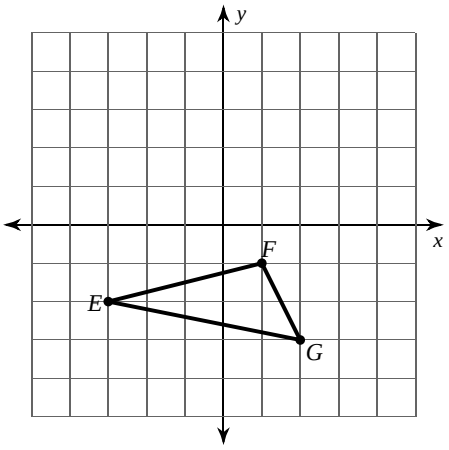
192) translation: $(2, -3)$



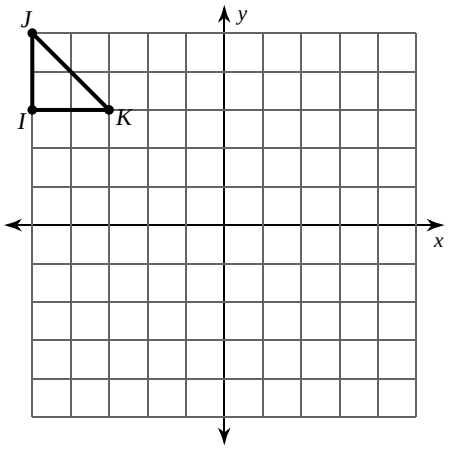
193) reflection across the x-axis



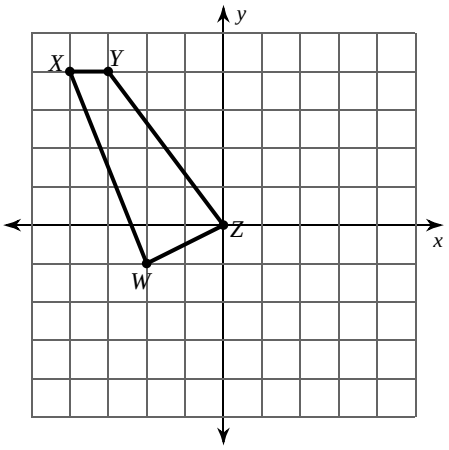
194) reflection across the y-axis



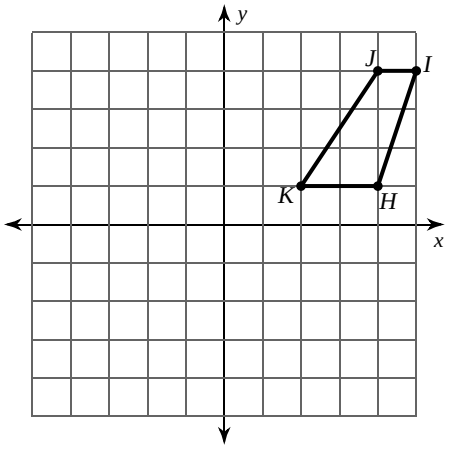
195) reflection across $y = 1$



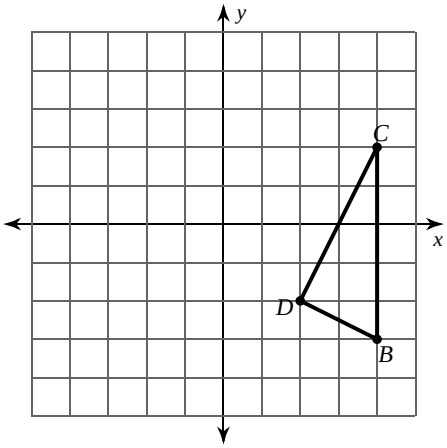
196) reflection across $x = -1$



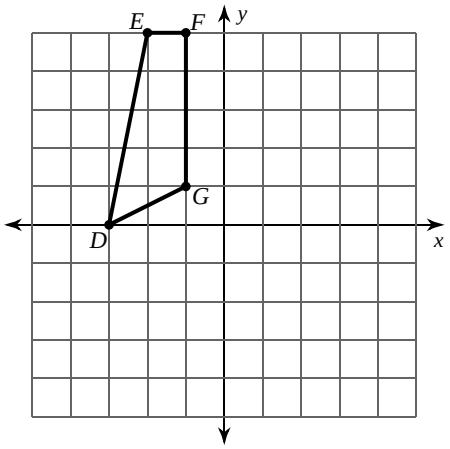
197) rotation 90° clockwise about the origin



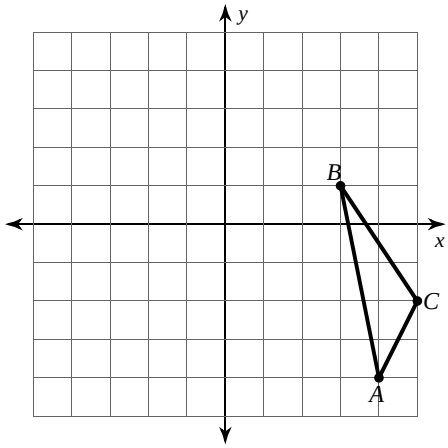
198) rotation 90° counterclockwise about the origin



199) rotation 90° counterclockwise about the origin

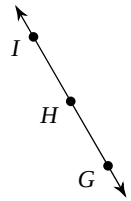


200) rotation 180° about the origin

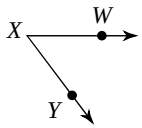


Answers to Sem2 Integrated Math PRACTICE Final (ver1)

1) 8.780
2) 5.5868
3) 6.6799
4) 7.7
5) 2.159
6) 4.17
7) 1.928
8) 3.879
9) 8.68
10) 5.8174
11) $4\sqrt{2}$
12) $5\sqrt{2}$
13) $18\sqrt{3}$
14) $6\sqrt{6}$
15) $24\sqrt{3}$
16) $6\sqrt{3}$
17) $-12\sqrt{6}$
18) $2\sqrt{3}$
19) $\sqrt{7}$
20) $38\sqrt{5}$
21) $-6\sqrt{3}$
22) $-2\sqrt{3}$
23) $\frac{1}{4}$
24) $\frac{1}{5}$
25) $\frac{\sqrt{5}}{4}$
26) $\frac{\sqrt{15}}{3}$
27) $\{-8\}$
28) $\{1\}$
29) $\{-4\}$
30) $\{1\}$
31) 11.7
32) 10.7
33) 7.4
34) 13.4
35) 10.4
36) 12.6
37) Yes
38) No
39) Yes
40) No
41) 8
42) 7
43) 21
44) 16
45) −11
46) −5
47) 9
48) 3
49) 10
50) 5
51) $\angle Q, \angle 3, \angle PQR, \angle RQP$
52) $\angle B, \angle 3, \angle ABC, \angle CBA$
53) right
54) obtuse
55) acute
56) acute
57) obtuse
58) right
59)



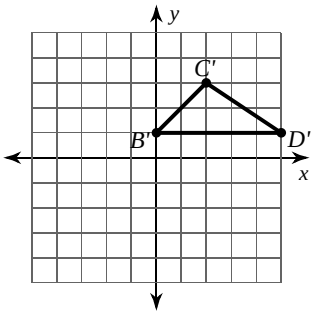
60)



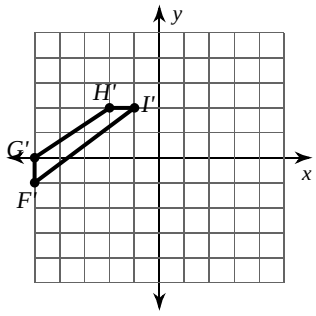
61) $\angle 1, \angle 2, \angle IVK$
62) $\angle 4, \angle 5, \angle 6, \angle DVB, \angle DVA, \angle CVA$
63) 110°
64) 26°
65) 94°
66) 31°
67) 26°
68) 151°
69) 5
70) 13
71) alternate interior
72) adjacent
73) corresponding
74) vertical
75) −7
76) 3
77) 7
78) 8
79) 12.5
80) 10.1
81) 5.8
82) 11.4
83) $(-7, 1)$
84) $(2, -5.5)$
85) $(1, 1.5)$
86) $(-3, 0.5)$
87) obtuse isosceles
88) right scalene
89) obtuse scalene
90) acute isosceles
91) right isosceles
92) acute scalene
93) equilateral
94) right scalene
95) 64°
96) 71°
97) 65°
98) 55°
99) 20°
100) 70°
101) 35°
102) 96°
103) 11
104) 74°
105) 124°
106) 65°
107) $\overline{60°}$
108) 28°
109) 8
110) 5
111) $\overline{CD}$
112) $\angle HCI$
113) $\triangle EFG \cong \triangle EUV$
114) $\triangle IJK \cong \triangle IRP$
115) ASA
116) SAS
117) AAS
118) SSS
119) $\angle S \cong \angle C$
120) $\angle V \cong \angle K$
121) $\angle DFE \cong \angle RFE$
122) $\angle A \cong \angle J$
123) parallelogram
124) rhombus
125) kite
126) trapezoid
127) rectangle
128) isosceles trapezoid
129) 111°
130) 91°
131) 9
132) 24
133) 55°
134) 70°
135) 100°
136) 50°
137) 6.4
138) 10.4
139) 14
140) 23
141) 125°
142) 100°
143) 5.7 km²
144) 75.2 mi²
145) 88.14 yd²
146) 36.6 in²
147) regular
148) not regular
149) not regular
150) regular
151) hexagon
152) pentagon
153) quadrilateral
154) nonagon
155) convex
156) concave
157) concave
158) convex
159) 900°
160) 3780°

161) 120°
162) 156°
163) 90°
164) 17.1°
165) 396
166) 27.6
167) 396
168) 232.4
169) 314.2 yd²
170) 452.4 yd²
171) 295.6 km²
172) 78.5 ft²
173) 37.7 ft
174) 71.6 ft
175) 35.2 in
176) 33.9 in
177) 9.7 km
178) 3.8 km
179) 7.2 km
180) 15.8 m
181) square pyramid
182) pentagonal prism
183) triangular prism
184) triangular pyramid
185) 63 m³
186) 168 km³
187) 1072.3 ft³
188) 9.4 km³

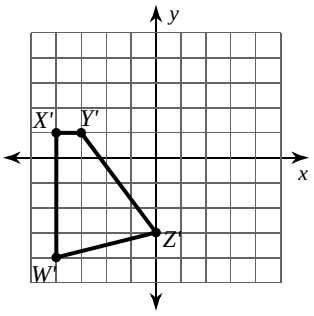
189)



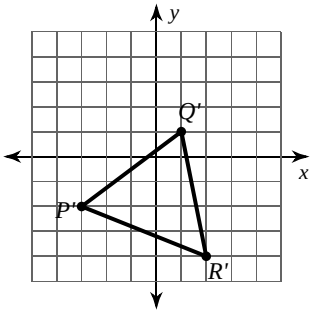
190)



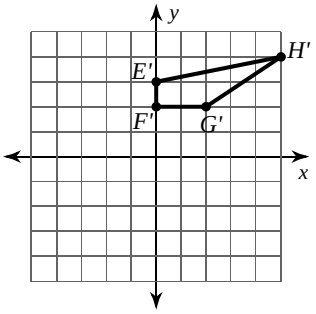
191)



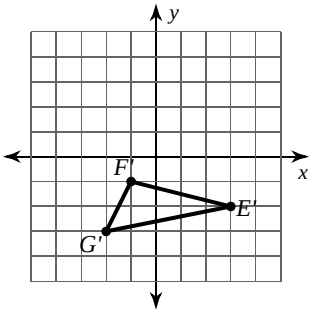
192)



193)



194)



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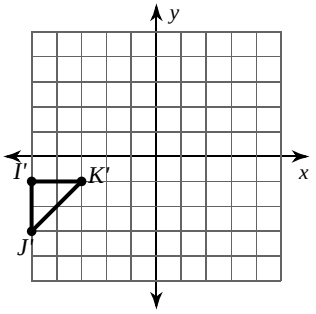
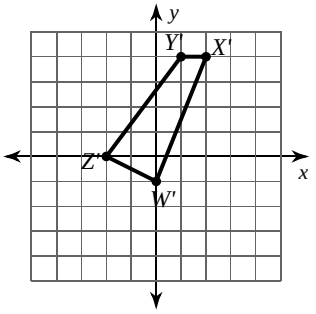
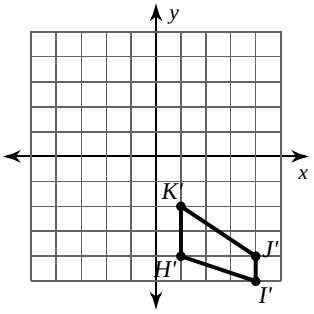


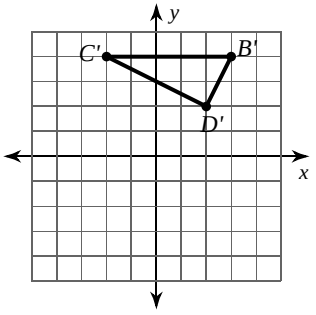
196)



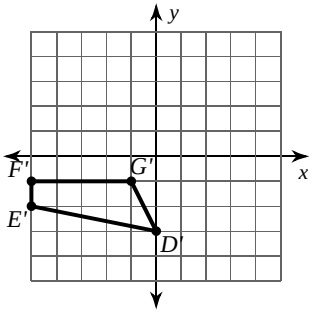
197)



198)



199)



200)