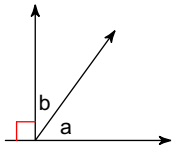
Geometry Name_____ ID: 1

Final Exam Review 2020

Date_____ Period____

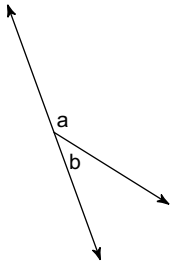
Name the relationship: complementary, linear pair, vertical, adjacent, alternate interior, corresponding, or alternate exterior.

1)



A) alternate interior
B) linear pair
C) corresponding
D) complementary
E) alternate exterior

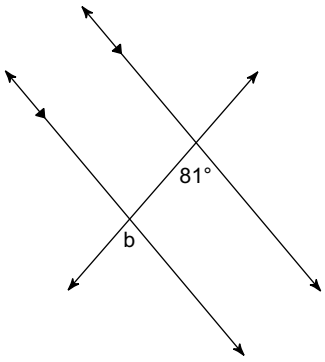
2)



A) alternate exterior
B) linear pair
C) alternate interior
D) vertical

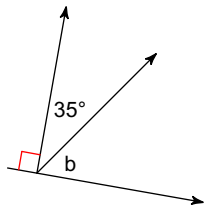
Find the measure of angle b.

3)



A) 9° B) 126° C) 90°
D) 81° E) 171°

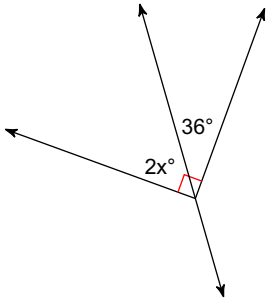
4)



A) 35° B) 158° C) 68°
D) 55° E) 22°

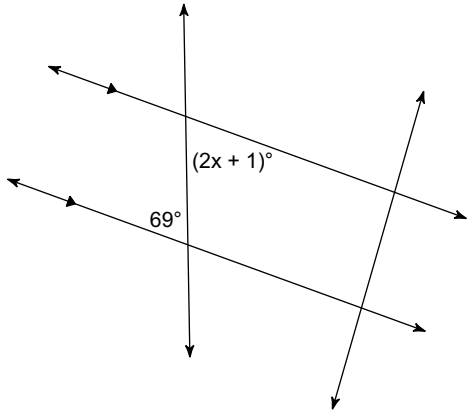
Find the value of x.

5)



A) 33 B) 36 C) 27
D) 35 E) 34

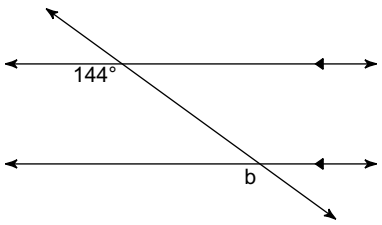
6)



A) 40 B) 35 C) 41
D) 37 E) 34

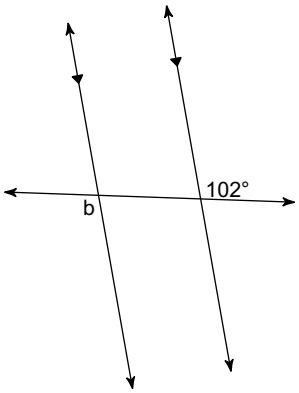
Find the measure of angle b.

7)



A) 36° B) 126°
C) 112° D) 54°
E) 144°

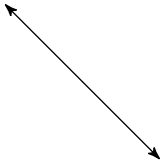
8)



A) 127° B) 168°
C) 102° D) 12°
E) 57°

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

9)



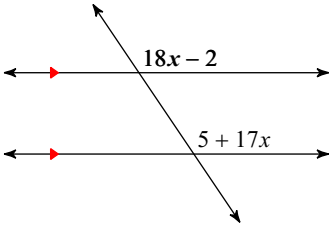
A) straight B) acute
C) right D) obtuse

10) 175°

A) obtuse B) right
C) acute D) straight

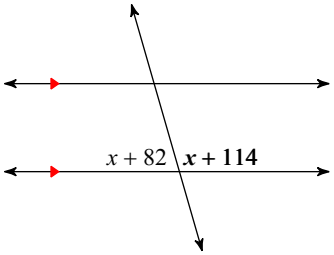
Find the measure of the angle indicated in bold.

11)



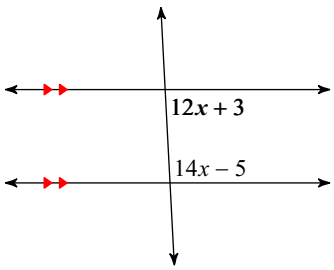
A) 115° B) 124°
C) 121° D) 123°
E) 113°

12)



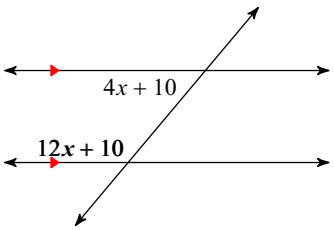
A) 95° B) 106°
C) 143° D) 80°
E) 135°

13)



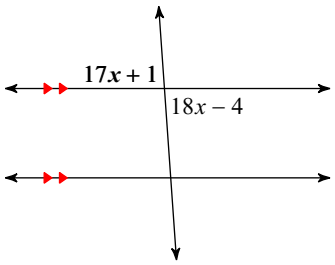
A) 73° B) 59° C) 57°
D) 109° E) 87°

14)



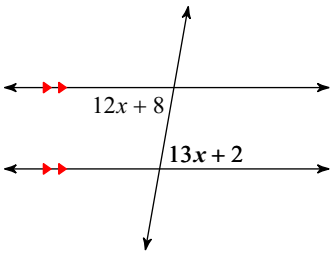
A) 140° B) 55°
C) 130° D) 100°
E) 60°

15)



A) 84° B) 63° C) 86°
D) 80° E) 81°

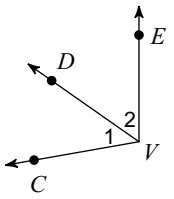
16)



A) 80° B) 120°
C) 60° D) 122°
E) 54°

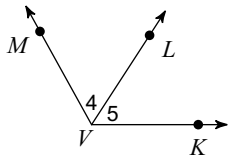
Name all the angles that have *V* as a vertex.

17)



A) ∠*1*, ∠*2*, ∠*VED*
B) ∠*1*, ∠*2*, ∠*EDC*
C) ∠*1*, ∠*2*, ∠*DCV*
D) ∠*1*, ∠*2*, ∠*CVE*

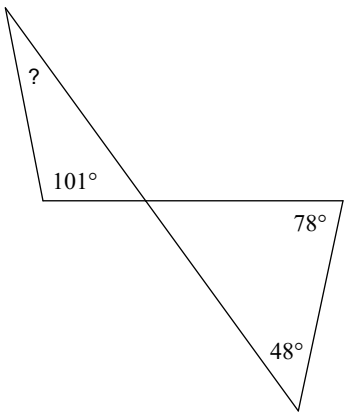
18)



A) ∠*4*, ∠*5*, ∠*VKL*
B) ∠*4*, ∠*5*, ∠*KLM*
C) ∠*4*, ∠*5*, ∠*MVK*
D) ∠*4*, ∠*5*, ∠*LMV*

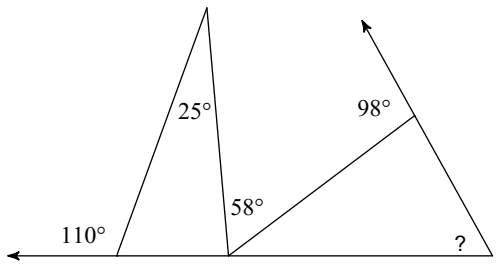
Find the measure of each angle indicated.

19)



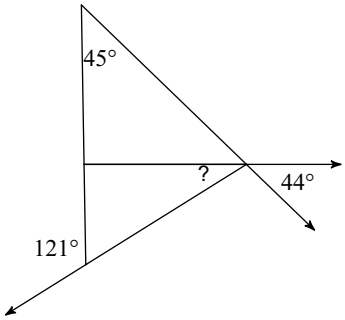
A) 31° B) 30° C) 60°
D) 100° E) 25°

20)



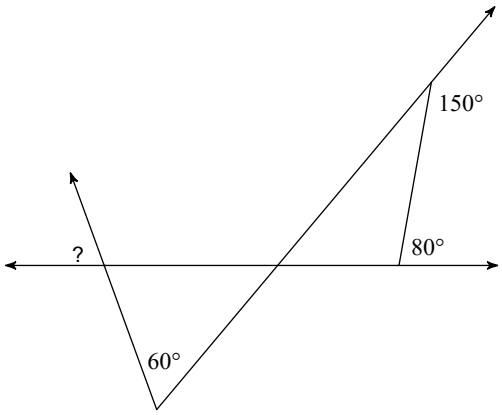
A) 61° B) 52° C) 80°
D) 62° E) 141°

21)



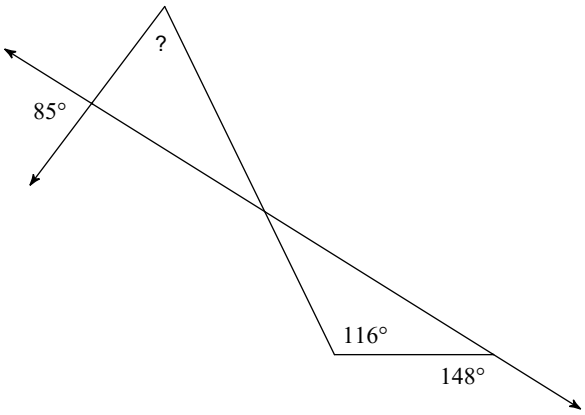
A) 32° B) 55° C) 42°
D) 30° E) 116°

22)



A) 70° B) 55° C) 89°
D) 85° E) 87°

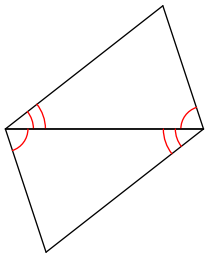
23)



A) 145° B) 43° C) 63°
D) 70° E) 64°

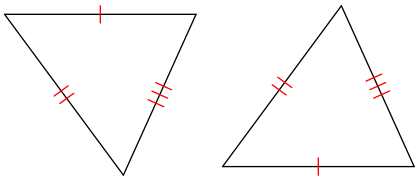
Determine if the two triangles are congruent. If they are, state how you know.

24)



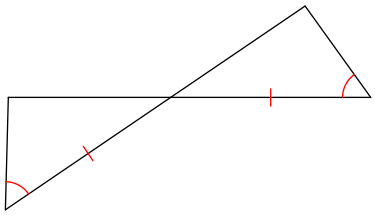
A) Not enough information
B) AAS
C) ASA
D) SSS
E) HL

25)



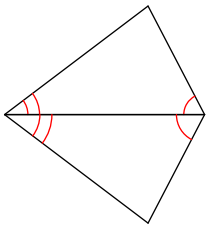
A) SSS B) HL
C) ASA D) SAS
E) AAS

26)



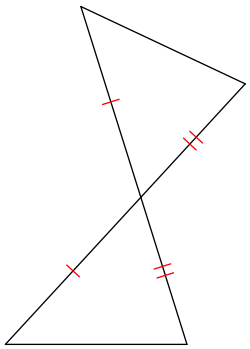
A) ASA B) AAS
C) HL D) SSS
E) SAS

27)



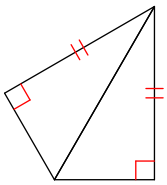
A) SSS B) HL
C) ASA D) AAS
E) SAS

28)



A) SAS
B) Not enough information
C) SSS
D) HL
E) AAS

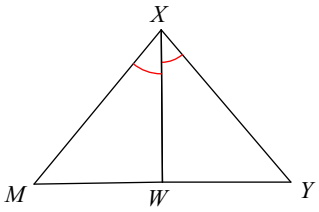
29)



A) SAS
B) SSS
C) HL
D) Not enough information
E) ASA

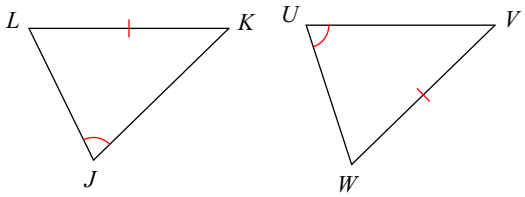
State what additional information is required in order to know that the triangles are congruent for the reason given.

30) ASA



A) $\angle WXY \cong \angle WXM$
B) $\overline{WX} \cong \overline{WX}$
C) $\overline{XY} \cong \overline{XM}$
D) $\angle YWX \cong \angle MWX$

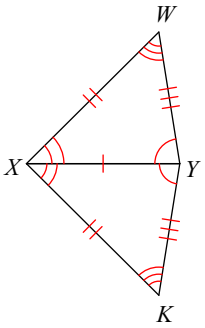
31) AAS



A) $\angle K \cong \angle V$ or $\angle L \cong \angle W$
B) $\overline{JK} \cong \overline{UV}$ or $\overline{LJ} \cong \overline{WU}$
C) $\overline{JK} \cong \overline{UV}$ or $\overline{KL} \cong \overline{VW}$
D) $\overline{KL} \cong \overline{VW}$ or $\overline{LJ} \cong \overline{WU}$

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

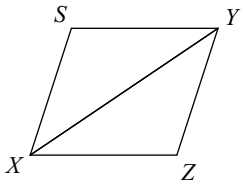
32) $\Delta YXW \cong \Delta YXK$



$\overline{YX} \cong$?

A) $\overline{YX}$ B) $\angle YXK$
C) $\overline{XK}$ D) $\overline{KY}$

33) $\Delta XYZ \cong \Delta YXS$

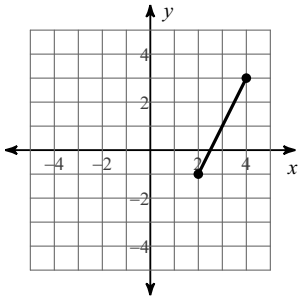


$\angle XYZ \cong$?

A) $\angle Y$ B) $\angle SYX$
C) $\angle S$ D) $\angle YXS$

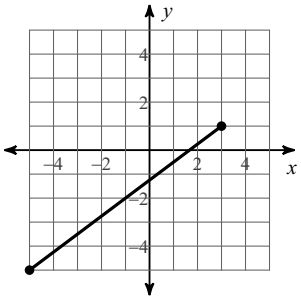
Find the distance between each pair of points.

34)



A) $\sqrt{10}$ B) $2\sqrt{5}$
C) 2 D) $\sqrt{6}$

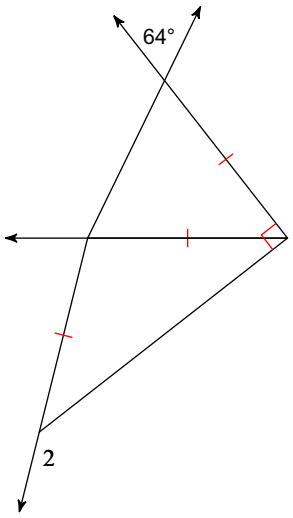
35)



A) $\sqrt{2}$ B) $\sqrt{14}$
C) $2\sqrt{5}$ D) 10

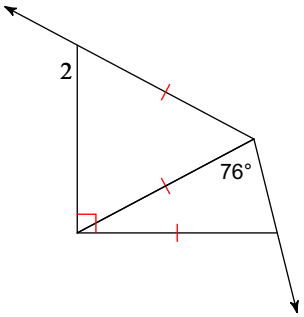
Find the value of *x*.

36) $m\angle 2 = x + 152$



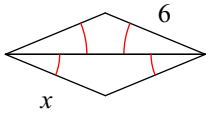
A) −12 B) −9 C) 8
D) −10 E) −11

37) $m\angle 2 = x + 129$



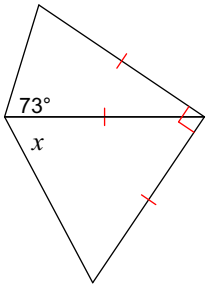
A) 12 B) −11 C) −9
D) 9 E) 8

38)



A) 6 B) 11 C) 8
D) 10 E) 12

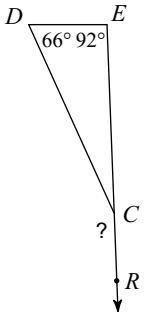
39)



A) 83° B) 73° C) 62°
D) 60° E) 79°

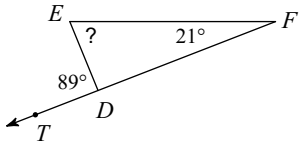
Find the measure of each angle indicated.

40)



A) 158° B) 128°
C) 141° D) 155°
E) 22°

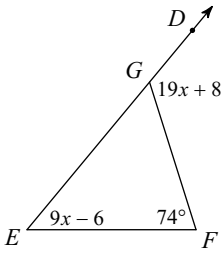
41)



A) 91° B) 79° C) 55°
D) 68° E) 53°

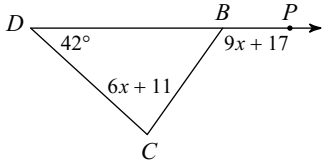
Solve for *x*.

42)



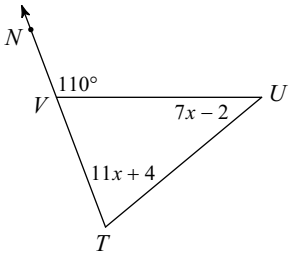
A) 2 B) 15 C) 6
D) 1 E) 13

43)



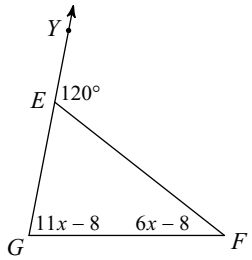
A) 10 B) 7 C) 6
D) 12 E) 15

44) Find $m\angle U$.



A) 37° B) 40° C) 48°
D) 34° E) 70°

45) Find $m\angle G$.



A) 40° B) 86° C) 88°
D) 97° E) 80°

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

46) $(-2, 1), (0, 7)$

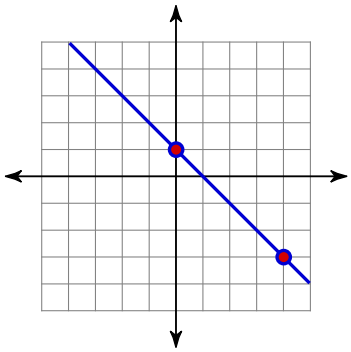
A) $(-1, -3)$ B) $\left(-\frac{1}{2}, 3\frac{1}{2}\right)$
C) $(2, 13)$ D) $(-1, 4)$

47) $(7, -10), (-5, 0)$

A) $(1, -5)$ B) $(-17, 10)$
C) $\left(-1\frac{1}{2}, -2\frac{1}{2}\right)$ D) $(6, -5)$

Find the slope of each line.

48)



A) 1 B) $-\frac{1}{2}$

C) -1 D) $\frac{1}{2}$

Find the slope of the line through each pair of points.

49) $(-20, 5), (-14, 16)$

A) $-\frac{6}{11}$ B) $\frac{11}{6}$

C) $-\frac{11}{6}$ D) $\frac{6}{11}$

50) $(18, -1), (19, 0)$

A) $\frac{1}{5}$ B) 1

C) -1 D) $-\frac{1}{5}$

Find the slope of a line parallel to each given line.

51) $y = -\frac{1}{3}x + 1$

A) -3 B) $\frac{1}{3}$

C) $-\frac{1}{3}$ D) 3

Find the slope of a line perpendicular to each given line.

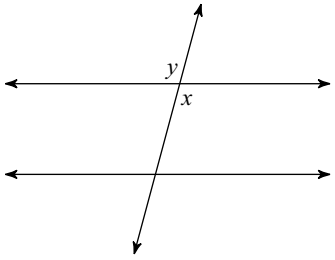
52) $y = -6x - 5$

A) 6 B) $-\frac{1}{6}$

C) $\frac{1}{6}$ D) -6

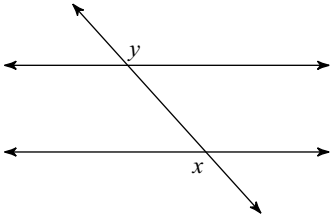
Identify each pair of angles as corresponding, alternate interior, alternate exterior, same-side interior, vertical, or adjacent.

53)



A) same-side interior
B) alternate interior
C) vertical
D) alternate exterior
E) corresponding

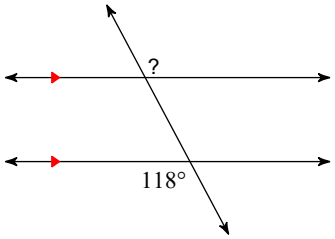
54)



A) alternate exterior
B) same-side interior
C) corresponding
D) alternate interior
E) vertical

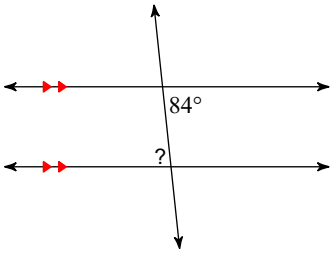
Find the measure of each angle indicated.

55)



A) 106° B) 118°
C) 45° D) 101°
E) 114°

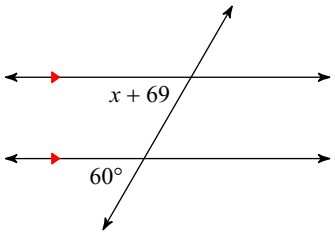
56)



A) 88° B) 84° C) 63°
D) 69° E) 95°

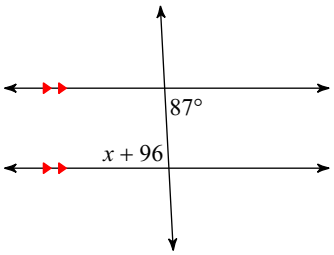
Solve for *x*.

57)



A) –5 B) –9 C) –8
D) 9 E) 8

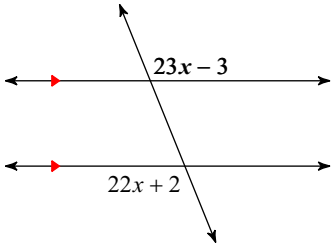
58)



A) 6 B) –6 C) –7
D) 9 E) –9

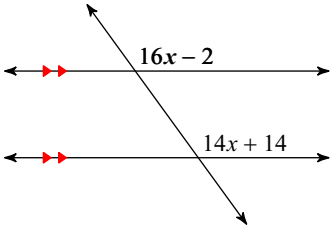
Find the measure of the angle indicated in bold.

59)



A) 46° B) 65°
C) 107° D) 60°
E) 112°

60)



A) 92° B) 120°
C) 135° D) 140°
E) 126°

State if the three numbers can be the measures of the sides of a triangle.

61) 6, 3, 12

A) No B) Yes

62) 10, 10, 18

A) No B) Yes

Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

63) 8, 9

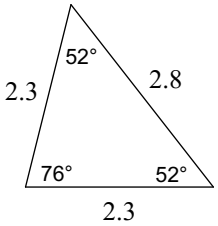
A) $4 < x < 13$ B) $1 < x < 17$
C) $1 < x < 14$ D) $2 < x < 17$
E) $1 < x < 15$

64) 6, 9

A) $3 < x < 13$ B) $3 < x < 11$
C) $3 < x < 15$ D) $3 < x < 12$
E) $4 < x < 15$

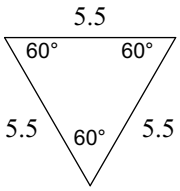
Classify each triangle by its angles and sides.

65)



A) right scalene
B) acute isosceles
C) obtuse scalene
D) scalene isosceles

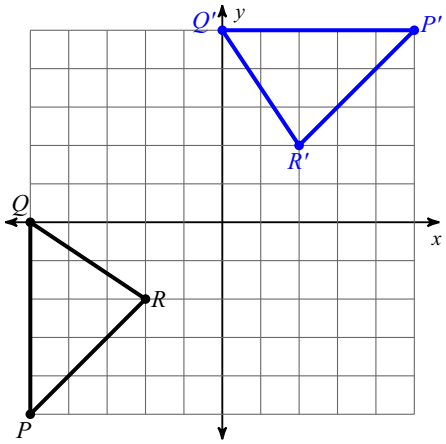
66)



A) equilateral
B) right equilateral
C) right scalene
D) acute right

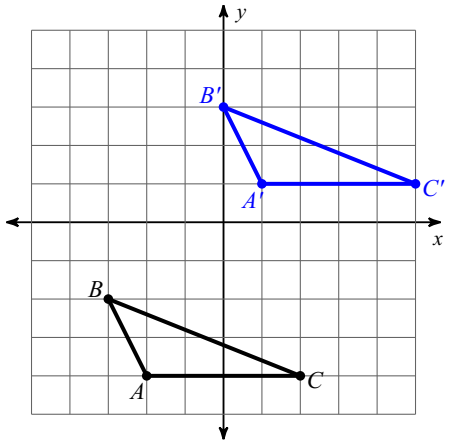
Write a rule to describe each transformation.

67)



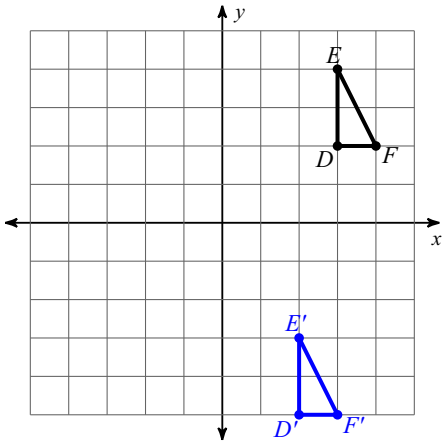
A) translation: 5 units up
B) reflection across $y = -x$
C) translation: 4 units right and 4 units up
D) reflection across $y = x$
E) reflection across $y = -1$

68)



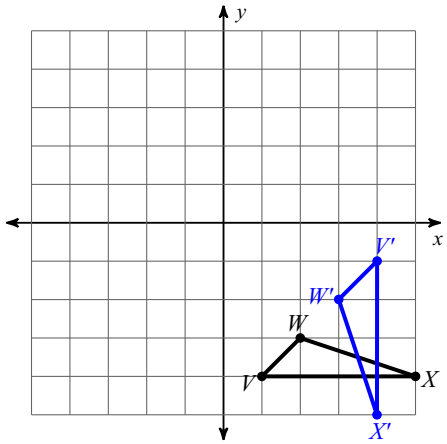
A) translation: 3 units right and 5 units up
B) reflection across $y = -3$
C) translation: 2 units left and 2 units up
D) translation: 2 units right and 2 units up
E) translation: 1 unit right and 5 units up

69)



A) translation: 1 unit left and 7 units down
B) reflection across $y = 1$
C) translation: 6 units left and 3 units down
D) translation: 3 units left and 1 unit down
E) reflection across $x = 1$

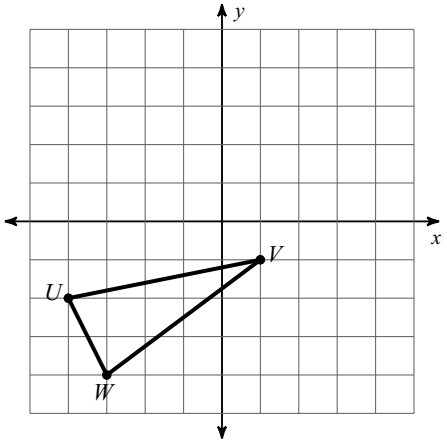
70)



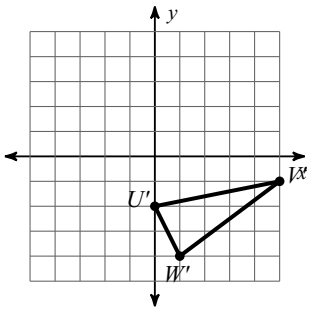
A) reflection across $y = -3$
B) reflection across $y = x$
C) translation: 1 unit left and 6 units up
D) reflection across $y = -x$
E) reflection across $x = 3$

Graph the image of the figure using the transformation given.

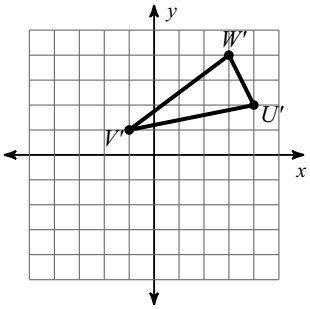
71) rotation 180° about the origin



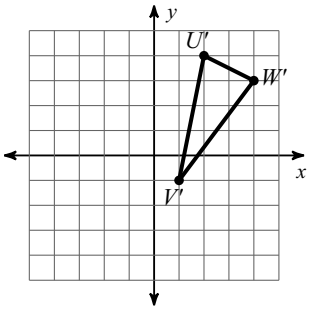
A)



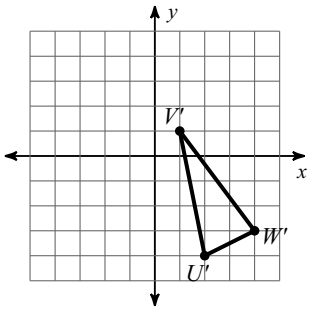
B)



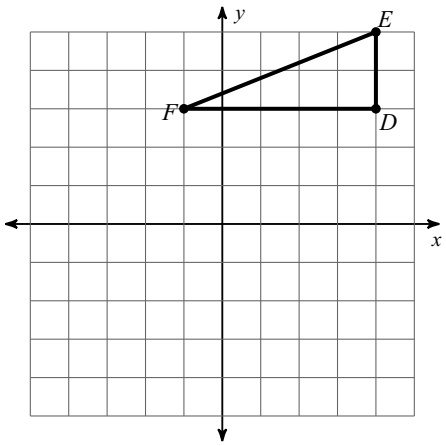
C)



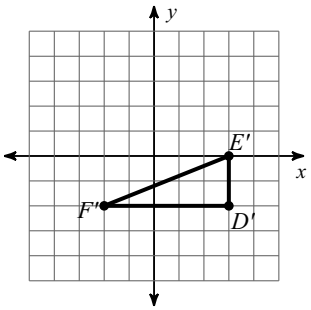
D)



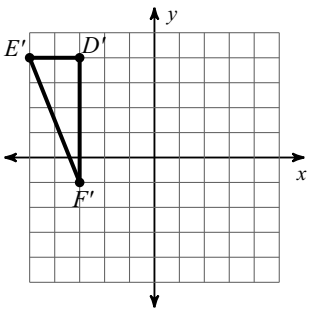
72) rotation 90° counterclockwise about the origin



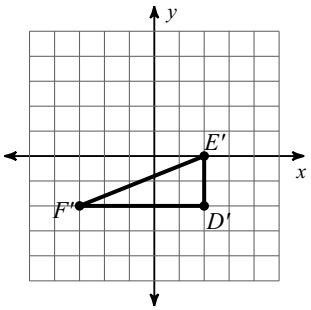
A)



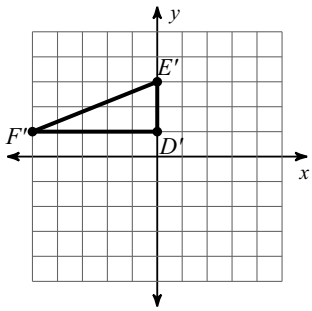
B)



C)

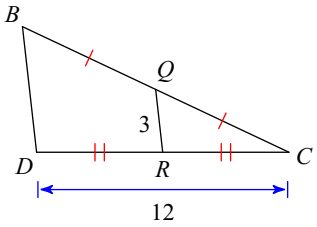


D)



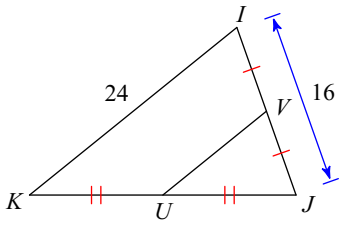
Find the missing length indicated.

73) Find *BD*



A) 10 B) 6 C) 12
D) 8 E) 2

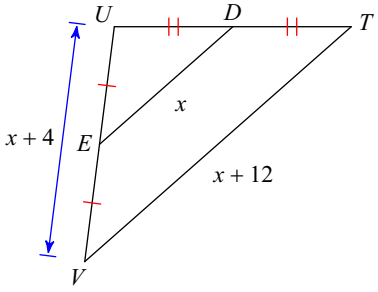
74) Find *VU*



A) 12 B) 5 C) 16
D) 9 E) 6

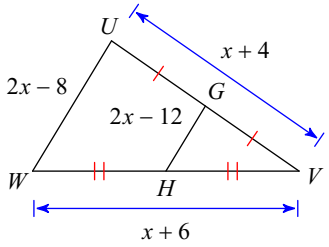
Solve for *x*.

75)



A) 12 B) −12 C) 6
D) −11 E) −8

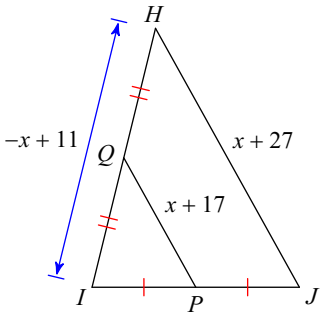
76)



A) 12 B) 9 C) 10
D) 6 E) 8

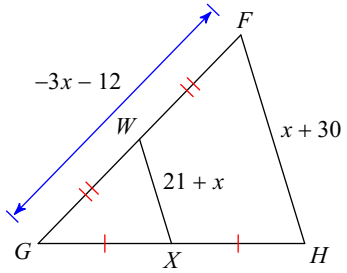
Find the missing length indicated.

77) Find *PQ*



A) 16 B) 20 C) 10
D) 14 E) 18

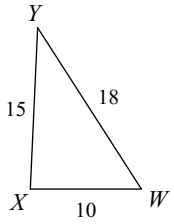
78) Find *HF*



A) 16 B) 4 C) 24
D) 6 E) 18

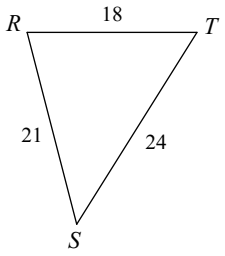
Order the angles in each triangle from smallest to largest.

79)



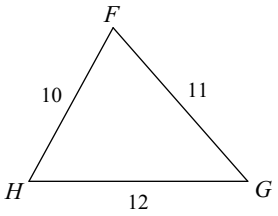
A) $\angle X$ and $\angle Y$; $\angle W$
B) $\angle X$, $\angle Y$, $\angle W$
C) $\angle Y$, $\angle W$, $\angle X$
D) $\angle W$, $\angle X$, $\angle Y$
E) $\angle X$, $\angle W$, $\angle Y$

80)



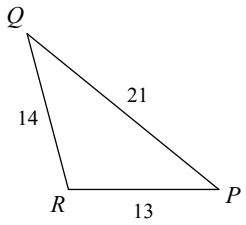
A) $\angle S$ and $\angle R$; $\angle T$
B) $\angle T$, $\angle S$, $\angle R$
C) $\angle S$, $\angle T$, $\angle R$
D) $\angle T$, $\angle R$, $\angle S$
E) $\angle R$, $\angle T$, $\angle S$

81)



A) $\angle F$ and $\angle G$; $\angle H$
B) $\angle F$, $\angle H$, $\angle G$
C) $\angle F$ and $\angle H$; $\angle G$
D) $\angle G$, $\angle F$, $\angle H$
E) $\angle G$, $\angle H$, $\angle F$

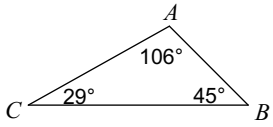
82)



A) $\angle P$, $\angle R$, $\angle Q$
B) $\angle Q$, $\angle P$, $\angle R$
C) $\angle Q$, $\angle R$, $\angle P$
D) $\angle R$, $\angle Q$, $\angle P$
E) $\angle R$, $\angle P$, $\angle Q$

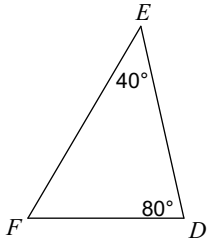
Order the sides of each triangle from shortest to longest.

83)



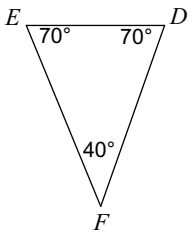
A) $\overline{AC}$, $\overline{AB}$, $\overline{BC}$
B) $\overline{BC}$, $\overline{AB}$, $\overline{AC}$
C) $\overline{AB}$, $\overline{BC}$, $\overline{AC}$
D) $\overline{AB}$, $\overline{AC}$, $\overline{BC}$
E) $\overline{AC}$ and $\overline{AB}$; $\overline{BC}$

84)



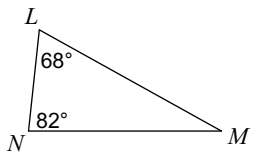
A) $\overline{FE}$, $\overline{ED}$, $\overline{FD}$
B) $\overline{FE}$, $\overline{FD}$, $\overline{ED}$
C) $\overline{FD}$, $\overline{ED}$, $\overline{FE}$
D) $\overline{FD}$, $\overline{FE}$, $\overline{ED}$
E) $\overline{ED}$ and $\overline{FE}$; $\overline{FD}$

85)



A) $\overline{ED}$; $\overline{FD}$ and $\overline{FE}$
B) $\overline{ED}$, $\overline{FE}$, $\overline{FD}$
C) $\overline{ED}$ and $\overline{FE}$; $\overline{FD}$
D) $\overline{FE}$, $\overline{ED}$, $\overline{FD}$
E) $\overline{FD}$, $\overline{ED}$, $\overline{FE}$

86)



A) $\overline{MN}$, $\overline{LM}$, $\overline{LN}$
B) $\overline{MN}$, $\overline{LN}$, $\overline{LM}$
C) $\overline{LN}$, $\overline{MN}$, $\overline{LM}$
D) $\overline{LM}$, $\overline{LN}$, $\overline{MN}$
E) $\overline{LM}$, $\overline{MN}$, $\overline{LN}$

State if the three numbers can be the measures of the sides of a triangle.

87) 8, 9, 10

A) Yes B) No

88) 3, 12, 9

A) Yes B) No

89) 12, 18, 12

A) No B) Yes

90) 11, 9, 12

A) Yes B) No

Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

91) 11, 12

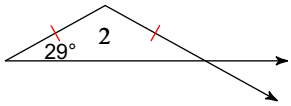
A) $2 < x < 22$ B) $1 < x < 21$
C) $4 < x < 23$ D) $1 < x < 23$
E) $1 < x < 22$

92) 7, 6

A) $5 < x < 13$ B) $1 < x < 13$
C) $2 < x < 13$ D) $1 < x < 12$
E) $2 < x < 11$

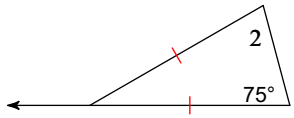
Find the value of x.

93) $m\angle 2 = 128 + x$



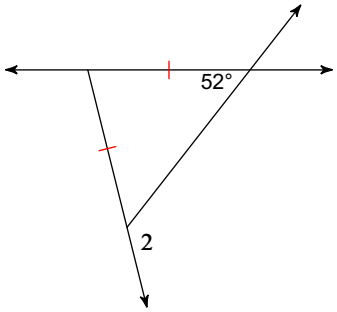
A) −6 B) −11 C) 6
D) 7 E) 9

94) $m\angle 2 = 7x + 12$



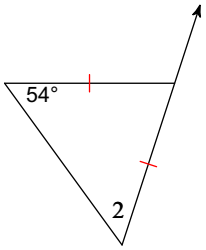
A) 6 B) 9 C) −11
D) 10 E) −6

95) $m\angle 2 = x + 136$



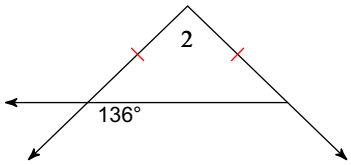
A) 8 B) −8 C) 10
D) 6 E) 11

96) $m\angle 2 = 3x + 18$



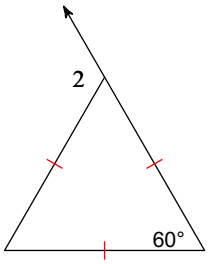
A) −7 B) 12 C) 9
D) −6 E) −10

97) $m\angle 2 = x + 99$



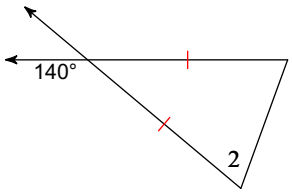
A) 7 B) 12 C) 11
D) −7 E) −8

98) $m\angle 2 = 1 + 17x$



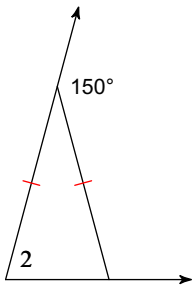
A) 6 B) 11 C) 10
D) −7 E) 7

99) $m\angle 2 = 7x + 7$



A) 9 B) 8 C) 10
D) 12 E) −7

100) $m\angle 2 = x + 83$



A) 6 B) −11 C) −8
D) −9 E) 9

Answers to Final Exam Review 2020 (ID: 1)

1) D
2) B
3) D
4) D
5) C
6) E
7) E
8) C
9) A
10) A
11) B
12) B
13) E
14) C
15) C
16) A
17) D
18) C
19) E
20) A
21) A
22) A
23) C
24) C
25) A
26) A
27) C
28) A
29) C
30) D
31) A
32) A
33) D
34) B
35) D
36) D
37) B
38) A
39) C
40) A
41) D
42) C
43) D
44) B
45) E
46) D
47) A
48) C
49) B
50) B
51) C
52) C
53) C
54) A
55) B
56) B
57) B
58) E
59) E
60) E
61) A
62) B
63) B
64) C
65) B
66) A
67) B
68) A
69) A
70) D
71) B
72) B
73) B
74) A
75) A
76) E
77) C
78) E
79) C
80) C
81) E
82) B
83) D
84) C
85) A
86) C
87) A
88) B
89) B
90) A
91) D
92) B
93) A
94) B
95) B
96) B
97) D
98) E
99) A
100) C