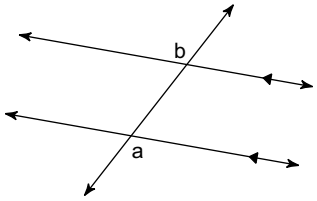
Final Exam Review #2

Date_____ Period____

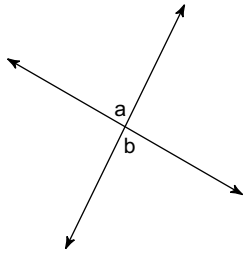
Name the relationship: complementary, linear pair, vertical, adjacent, alternate interior, corresponding, or alternate exterior.

1)



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

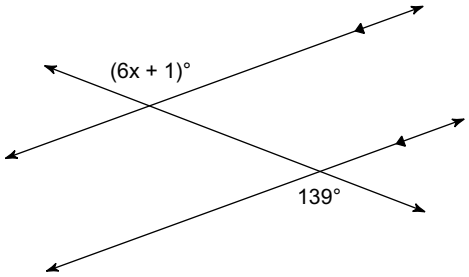
2)



A) adjacent
B) alternate exterior
C) vertical
D) complementary

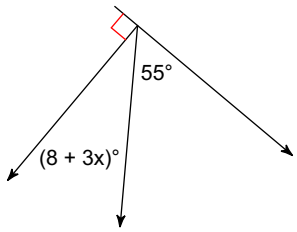
Find the value of x.

3)



A) 23 B) 26
C) 20 D) 17

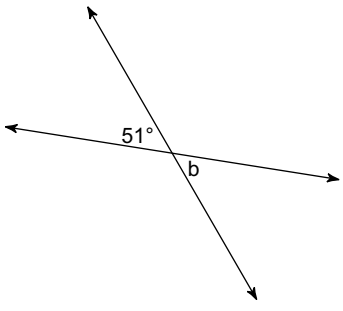
4)



A) 3 B) 1
C) 9 D) -3

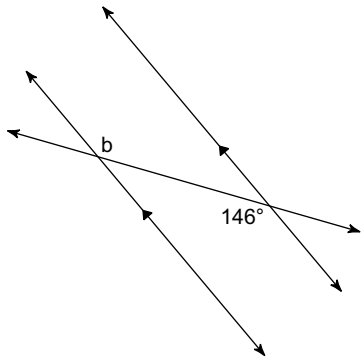
Find the measure of angle b.

5)



A) 129° B) 72°
C) 18° D) 51°

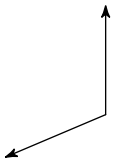
6)



A) 124° B) 146°
C) 56° D) 34°

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

7)



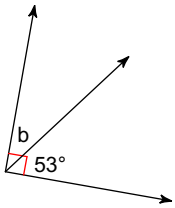
A) obtuse B) straight
C) right D) acute

8) 121°

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

Find the measure of angle b.

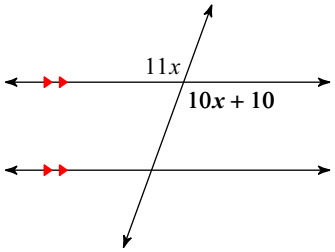
9)



A) 37° B) 36°
C) 143° D) 126°

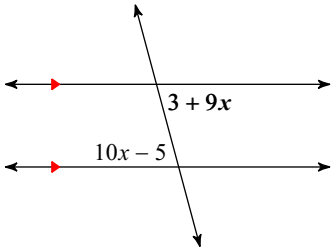
Find the measure of the angle indicated in bold.

10)



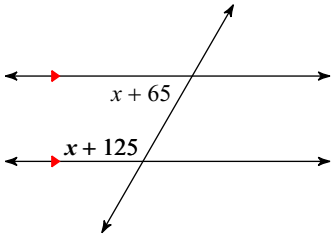
A) 85° B) 100°
C) 95° D) 110°

11)



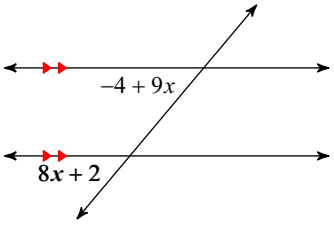
A) 55° B) 75°
C) 65° D) 70°

12)



A) 120° B) 81°
C) 115° D) 145°

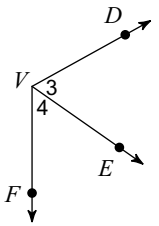
13)



A) 50° B) 40°
C) 105° D) 65°

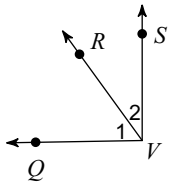
Name all the angles that have V as a vertex.

14)



A) $\angle 3, \angle 4, \angle EDV$
B) $\angle 3, \angle 4, \angle FED$
C) $\angle 3, \angle 4, \angle DVF$
D) $\angle 3, \angle 4, \angle VFE$

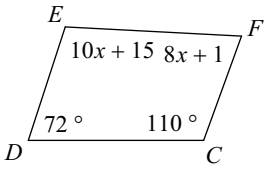
15)



A) $\angle 1, \angle 2, \angle QVS$
B) $\angle 1, \angle 2, \angle VSR$
C) $\angle 1, \angle 2, \angle RQV$
D) $\angle 1, \angle 2, \angle SRQ$

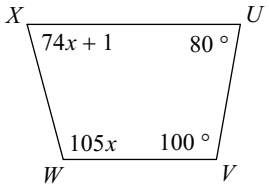
Find the measure of each angle indicated.

16) $m\angle F$



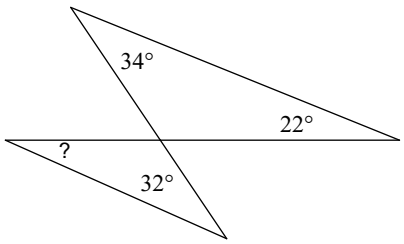
A) 73°
B) 91°
C) 94°
D) 120°

17) $m\angle W$



A) 60°
B) 108°
C) 80°
D) 105°

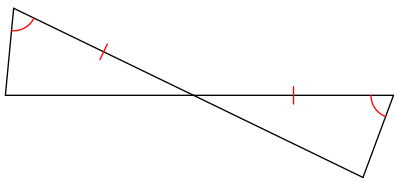
18)



A) 145°
B) 24°
C) 31°
D) 51°

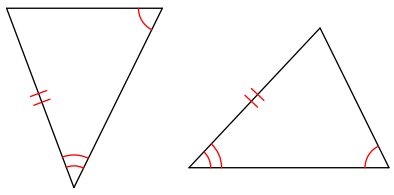
State if the two triangles are congruent. If they are, state how you know.

19)



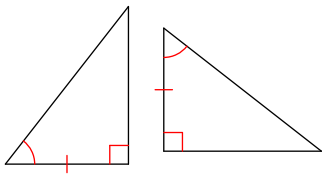
A) ASA
B) SAS
C) SSS
D) Not congruent

20)



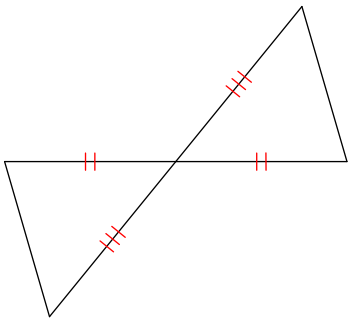
A) Not congruent
B) SSS
C) ASA
D) AAS

21)



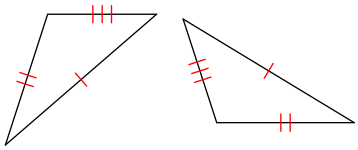
A) SAS B) ASA
C) AAS D) SSS

22)



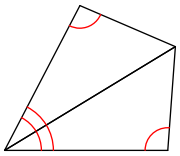
A) SAS B) ASA
C) SSS D) Not congruent

23)



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

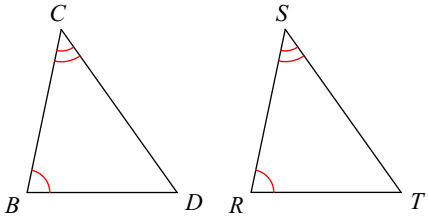
24)



A) SSS B) AAS
C) Not congruent D) ASA

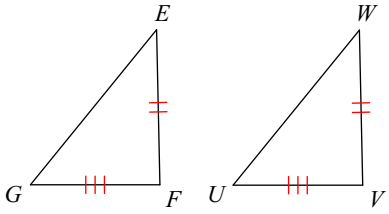
State what additional information is required in order to know that the triangles are congruent for the reason given.

25) ASA



A) $\overline{BC} \cong \overline{RS}$
B) $\overline{CD} \cong \overline{ST}$ or $\overline{DB} \cong \overline{TR}$
C) $\angle B \cong \angle R$
D) $\angle C \cong \angle S$

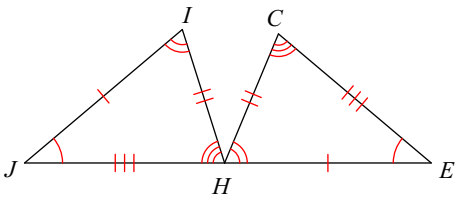
26) SSS



A) $\overline{FG} \cong \overline{VU}$ or $\overline{GE} \cong \overline{UW}$
B) $\angle E \cong \angle W$
C) $\overline{EF} \cong \overline{WV}$
D) $\overline{GE} \cong \overline{UW}$

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

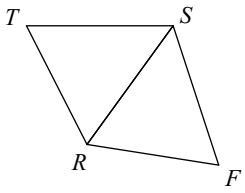
27) $\triangle JIH \cong \triangle EHC$



$\angle J \cong$?

A) $\angle E$ B) $\angle C$
C) $\angle EHC$ D) $\angle H$

28) $\triangle SRT \cong \triangle SRF$

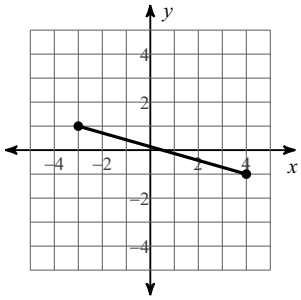


$\overline{RT} \cong$?

A) $\angle F$ B) $\overline{FS}$
C) $\overline{RF}$ D) $\overline{SR}$

Find the distance between each pair of points.

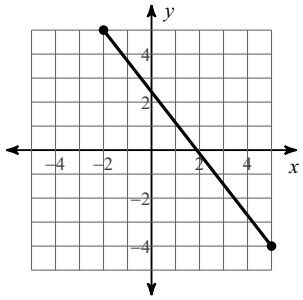
29)



A) 1 B) $3\sqrt{13}$

C) 3 D) $\sqrt{53}$

30)

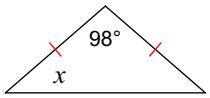


A) $3\sqrt{5}$ B) $\sqrt{130}$

C) 4 D) $\sqrt{10}$

Find the value of *x*.

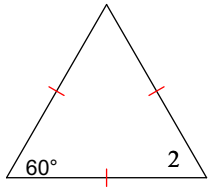
31)



A) 44° B) 41°

C) 29° D) 54°

32) $m\angle 2 = x + 67$

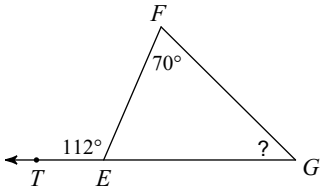


A) −7 B) 8

C) 9 D) 12

Find the measure of each angle indicated.

33)



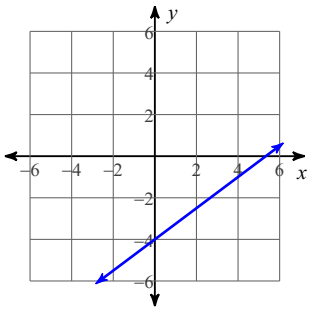
A) 42° B) 68°

C) 51° D) 34°

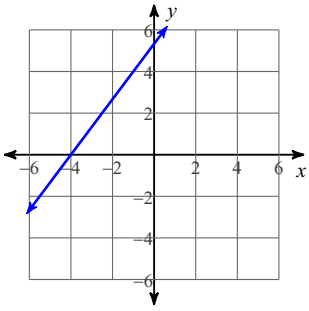
Sketch the graph of each line.

34) $y = \frac{3}{4}x - 4$

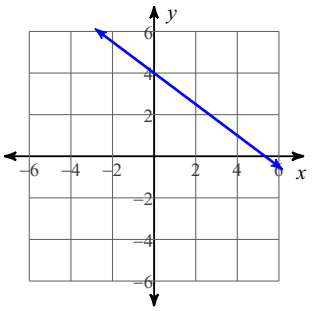
A)



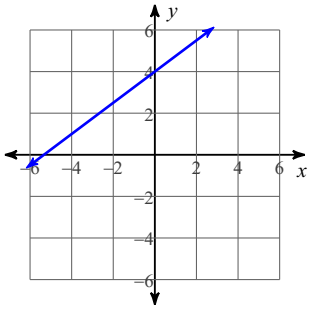
B)



C)

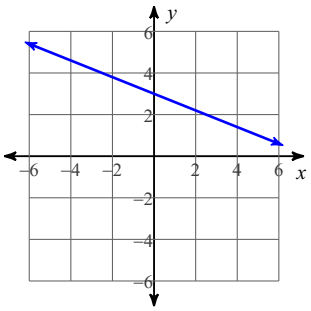


D)

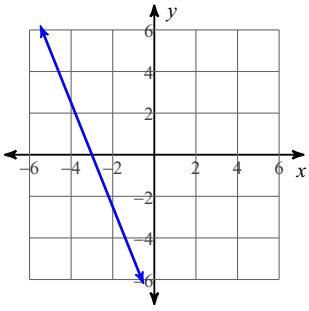


35) $y = -\frac{2}{5}x + 3$

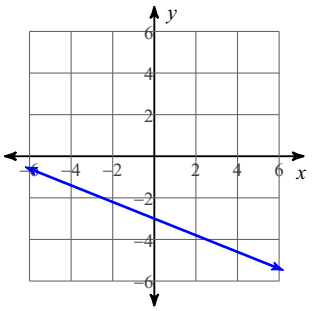
A)



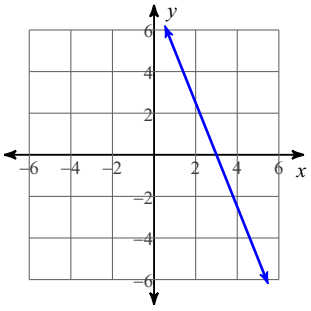
B)



C)



D)



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

36) $(-7, -3)$, $(-1, -1)$

A) $(-5, -1)$ B) $(-3, -1)$

C) $(5, 1)$ D) $(-4, -2)$

37) $(2, 4)$, $(2, 3)$

A) $\left(3, 2\frac{1}{2}\right)$ B) $(2, 2)$

C) $\left(0, \frac{1}{2}\right)$ D) $\left(2, 3\frac{1}{2}\right)$

Find the other endpoint of the line segment with the given endpoint and midpoint.

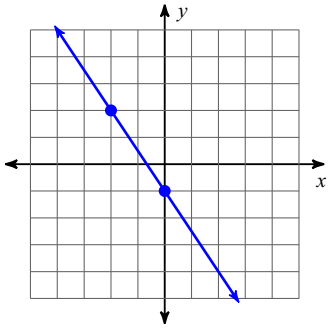
38) Endpoint: $(3, -5)$, midpoint: $(5, 3)$

A) $(-1, 4)$ B) $(-1, -4)$

C) $(7, 11)$ D) $\left(-2\frac{1}{2}, -2\frac{1}{2}\right)$

Find the slope of each line.

39)



A) $\frac{3}{2}$ B) $\frac{2}{3}$

C) $-\frac{3}{2}$ D) $-\frac{2}{3}$

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

40) $(-5, -20)$, $(-13, 18)$

A) $-\frac{4}{19}$ B) $\frac{19}{4}$

C) $-\frac{19}{4}$ D) $\frac{4}{19}$

41) $(-13, -7)$, $(-11, -5)$

A) 1 B) -1

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

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

42) $y = \frac{5}{2}x + 5$

A) $-\frac{5}{2}$ B) $\frac{5}{2}$

C) $\frac{2}{5}$ D) $-\frac{2}{5}$

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

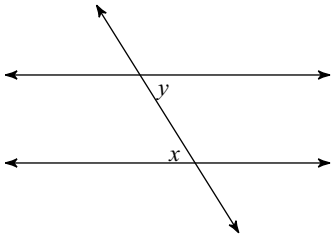
43) $y = -3x + 1$

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

C) $-\frac{1}{3}$ D) –3

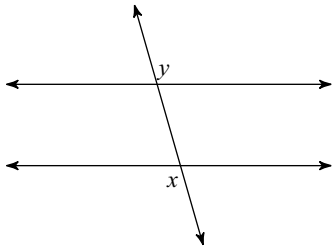
Identify each pair of angles as corresponding, alternate interior, alternate exterior, consecutive interior, vertical, or adjacent.

44)



A) alternate interior
B) corresponding
C) alternate exterior
D) consecutive interior

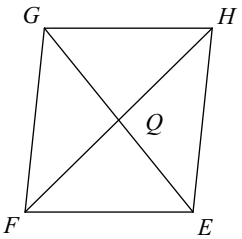
45)



A) alternate interior
B) alternate exterior
C) consecutive interior
D) corresponding

Find the measurement indicated in each parallelogram.

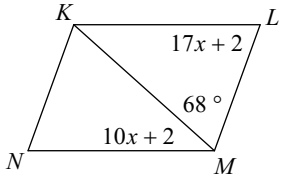
46) $FQ = x + 9$
$QH = 3x - 7$
Find FQ



A) 16 B) 17

C) 9 D) 22

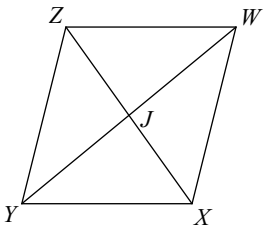
47) Find $m\angle N$



A) 50° B) 70°

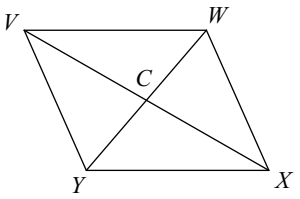
C) 85° D) 121°

48) $XJ = 2x$
$JZ = 3x - 5$
Find XZ



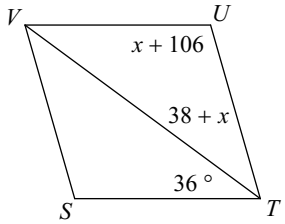
A) 18 B) 17
C) 20 D) 21

49) $WC = x + 3$
$WY = x + 17$
Find WC



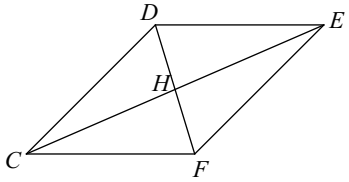
A) 14 B) 13
C) 23 D) 17

50) Find $m\angle UVS$



A) 105° B) 74°
C) 100° D) 30°

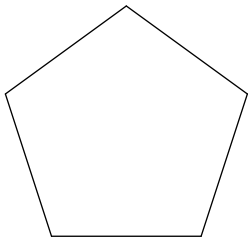
51) $DH = 3x$
$HF = 2x + 2$
Find DH



A) 19 B) 9 C) 6 D) 8

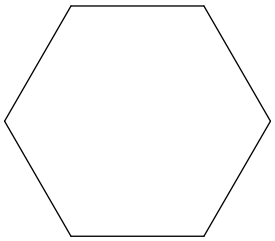
Find the interior angle sum for each polygon. Round your answer to the nearest tenth if necessary.

52)



A) 360° B) 1440°
C) 900° D) 540°

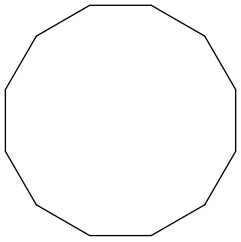
53)



A) 540° B) 1080°
C) 720° D) 1260°

Find the measure of one exterior angle in each regular polygon. Round your answer to the nearest tenth if necessary.

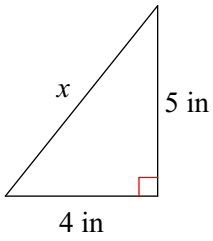
54)



A) 30° B) 24°
C) 36° D) 22.5°

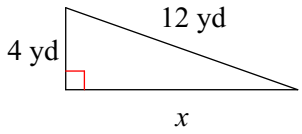
Find the missing side of each triangle. Leave your answers in simplest radical form.

55)



A) $\sqrt{41}$ in
B) 3 in
C) $\sqrt{66}$ in
D) $\sqrt{57}$ in

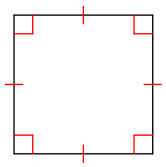
56)



A) $4\sqrt{7}$ yd
B) $8\sqrt{2}$ yd
C) $4\sqrt{10}$ yd
D) $4\sqrt{17}$ yd

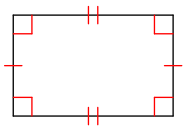
State the most specific name for each figure.

57)



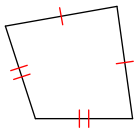
A) square
B) kite
C) quadrilateral
D) trapezoid

58)



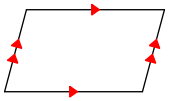
A) rectangle
B) trapezoid
C) quadrilateral
D) kite

59)



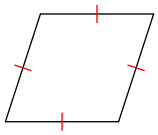
A) kite
B) quadrilateral
C) isosceles trapezoid
D) trapezoid

60)



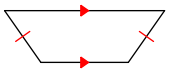
A) quadrilateral
B) trapezoid
C) parallelogram
D) kite

61)



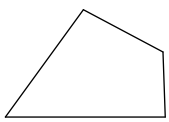
A) trapezoid
B) rhombus
C) kite
D) quadrilateral

62)



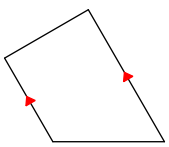
A) quadrilateral
B) kite
C) trapezoid
D) isosceles trapezoid

63)



A) kite
B) trapezoid
C) quadrilateral
D) isosceles trapezoid

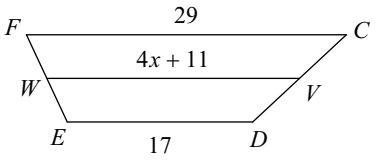
64)



A) trapezoid
B) isosceles trapezoid
C) kite
D) quadrilateral

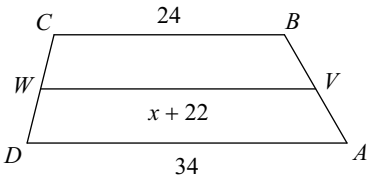
Solve for *x*. Each figure is a trapezoid.

65)



A) 12 B) 5
C) 3 D) 1

66)



A) 2 B) 7
C) 11 D) 3

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

67) 8, 7, 14

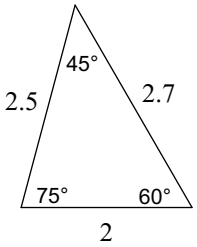
A) No B) Yes

68) 22, 12, 7

A) No B) Yes

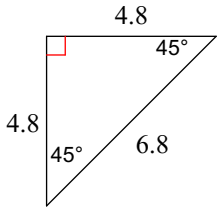
Classify each triangle by its angles and sides.

69)



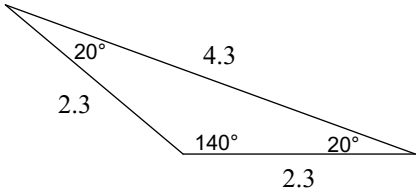
A) right obtuse
B) obtuse isosceles
C) right isosceles
D) acute scalene

70)



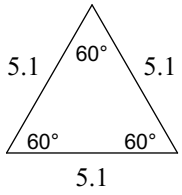
A) acute isosceles
B) right isosceles
C) acute scalene
D) acute right

71)



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

72)



A) obtuse equilateral
B) acute obtuse
C) equilateral
D) obtuse isosceles