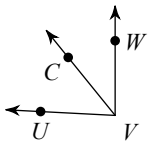
Geometry Name_____ ID: 1

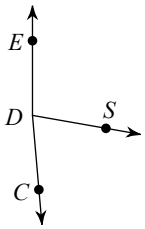
Assignment

Date_____ Period____

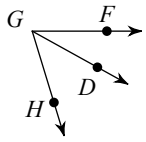
1) $m\angle CVW = 39x$, $m\angle UVC = 48°$, and $m\angle UVW = 86x + 1$. Find x.



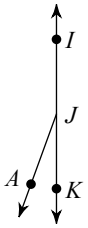
2) Find x if $m\angle EDC = 88x - 1$, $m\angle EDS = 100°$, and $m\angle SDC = 37x + 1$.



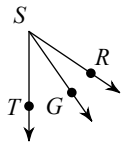
3) Find x if $m\angle DGH = 5x - 1$, $m\angle FGD = 4x - 7$, and $m\angle FGH = 73°$.



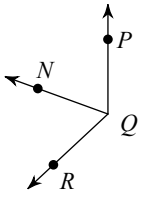
4) Find x if $m\angle AJI = 21x - 8$, $m\angle KJA = 20°$, and $m\angle KJI = 22x + 4$.



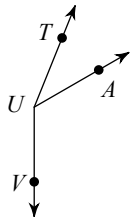
5) Find x if $m\angle GST = 7 + 4x$, $m\angle RSG = 21°$, and $m\angle RST = 8x$.



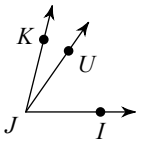
6) $m\angle RQP = 133°$, $m\angle NQP = 18x - 2$, and $m\angle RQN = -1 + 16x$. Find x.



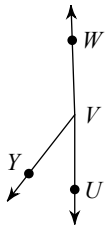
7) Find x if $m\angle AUV = x + 128$, $m\angle TUV = 158°$, and $m\angle TUA = x + 46$.



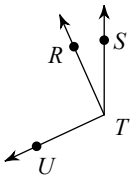
8) $m\angle UJI = 55°$, $m\angle KJU = 6x - 3$, and $m\angle KJI = 20x - 4$. Find x.



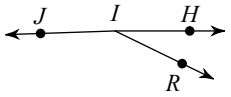
9) $m\angle UVY = 19x$, $m\angle YVW = 70x$, and $m\angle UVW = 178°$. Find x.



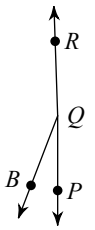
10) $m\angle UTR = 91°$, $m\angle UTS = 2x + 115$, and $m\angle RTS = x + 24$. Find x.



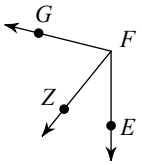
11) $m\angle HIJ = 15x - 2$, $m\angle RIJ = 152°$, and $m\angle HIR = 3x - 10$. Find x.



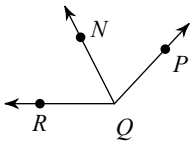
12) Find x if $m\angle BQR = 157°$, $m\angle PQB = 6x - 3$, and $m\angle PQR = 44x + 2$.



13) $m\angle ZFG = 65°$, $m\angle EFG = 7x + 20$, and $m\angle EFZ = 4x - 9$. Find x.

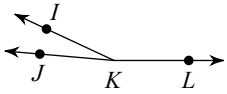


14) Find x if $m\angle NQP = 70°$, $m\angle RQN = 16x - 1$, and $m\angle RQP = 33x + 1$.

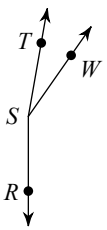


15) $m\angle BJK = 17x - 8$, $m\angle IJB = 2x + 4$, and $m\angle IJK = 167°$. Find x.

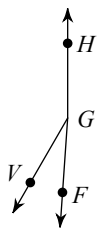
16) $m\angle IKL = 155°$, $m\angle JKI = 4x$, and $m\angle JKL = 36x - 5$. Find x.



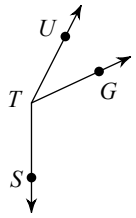
17) Find x if $m\angle TSR = 170°$, $m\angle TSW = x + 34$, and $m\angle WSR = 154 + x$.



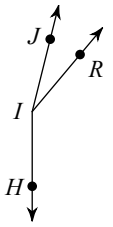
18) $m\angle FGV = 2x + 4$, $m\angle VGH = 150°$, and $m\angle FGH = 17x - 11$. Find x.



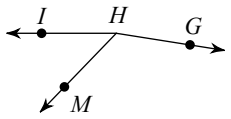
19) Find x if $m\angle UTS = 19x + 1$, $m\angle GTS = 115°$, and $m\angle UTG = 5x - 2$.



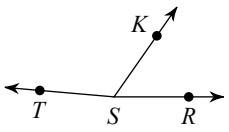
20) $m\angle RIH = 16x - 4$, $m\angle JIR = x + 17$, and $m\angle JIH = 166°$. Find x.



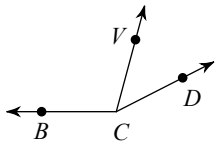
21) $m\angle GHI = 19x$, $m\angle GHM = 13x + 8$, and $m\angle MHI = 46°$. Find x.



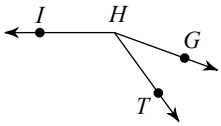
22) $m\angle TSR = 175°$, $m\angle TSK = 40x$, and $m\angle KSR = 17x + 4$. Find x.



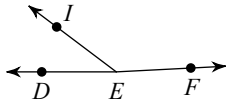
23) $m\angle BCV = x + 106$, $m\angle BCD = 153°$, and $m\angle VCD = x + 49$. Find x.



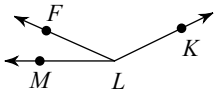
24) Find x if $m\angle GHI = 33x - 5$, $m\angle THI = 126°$, and $m\angle GHT = 7x - 1$.



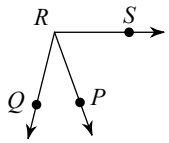
25) $m\angle DEF = 177°$, $m\angle DEI = x + 42$, and $m\angle IEF = x + 145$. Find x.



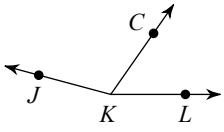
26) Find x if $m\angle MLF = x + 25$, $m\angle FLK = x + 131$, and $m\angle MLK = 154°$.



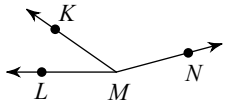
27) Find x if $m\angle SRQ = 5 + 33x$, $m\angle PRQ = 11x + 1$, and $m\angle SRP = 70°$.



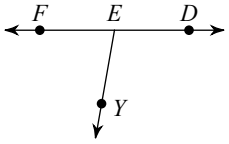
28) $m\angle JKL = 16x + 5$, $m\angle CKL = 6x - 5$, and $m\angle JKC = 110°$. Find x.



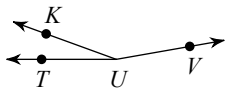
29) $m\angle LMK = 2x + 35$, $m\angle KMN = x + 130$, and $m\angle LMN = 165°$. Find x.



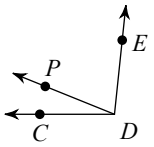
30) $m\angle YEF = 80°$, $m\angle DEY = 21x - 5$, and $m\angle DEF = 36x$. Find x.



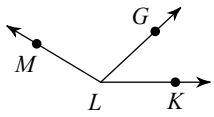
31) Find $m\angle KUV$ if $m\angle KUV = 15x + 15$, $m\angle TUV = 19x - 1$, and $m\angle TUK = 20°$.



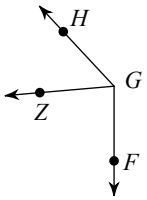
32) Find $m\angle PDE$ if $m\angle CDP = x + 34$, $m\angle PDE = x + 86$, and $m\angle CDE = 96°$.



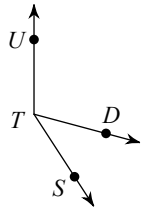
33) Find $m\angle GLK$ if $m\angle GLK = x + 55$, $m\angle MLG = x + 118$, and $m\angle MLK = 149°$.



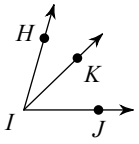
34) $m\angle FGZ = 29x - 2$, $m\angle FGH = 44x + 5$, and $m\angle ZGH = 52°$. Find $m\angle FGZ$.



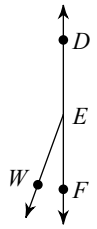
35) $m\angle UTD = 105°$, $m\angle UTS = 13x + 4$, and $m\angle DTS = 2x + 20$. Find $m\angle DTS$.



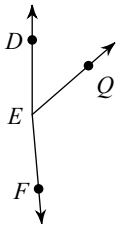
36) Find $m\angle KIJ$ if $m\angle KIJ = 5x + 4$, $m\angle HIK = 2x + 14$, and $m\angle HIJ = 74°$.



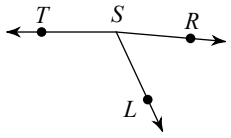
37) $m\angle FED = 180°$, $m\angle WED = x + 164$, and $m\angle FEW = x + 24$. Find $m\angle WED$.



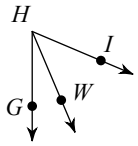
38) $m\angle DEF = 30x - 5$, $m\angle QEF = 126°$, and $m\angle DEQ = 9x - 5$. Find $m\angle DEF$.



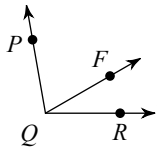
39) Find $m\angle RST$ if $m\angle LST = 9x + 7$, $m\angle RSL = 60°$, and $m\angle RST = 15x - 5$.



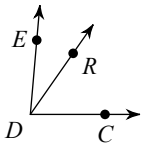
40) Find $m\angle WHG$ if $m\angle IHG = 9x + 4$, $m\angle WHG = 3x + 2$, and $m\angle IHW = 44°$.



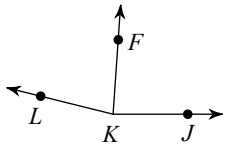
41) Find $m\angle PQR$ if $m\angle FQR = 6x + 6$, $m\angle PQR = 26x - 4$, and $m\angle PQF = 70°$.



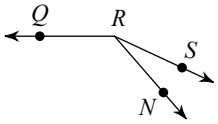
42) Find $m\angle EDC$ if $m\angle EDR = 3x + 3$, $m\angle EDC = 8x + 13$, and $m\angle RDC = 55°$.



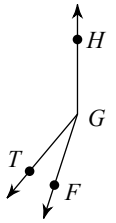
43) Find $m\angle FKJ$ if $m\angle FKJ = 20x + 6$, $m\angle LKF = 80°$, and $m\angle LKJ = 40x + 6$.



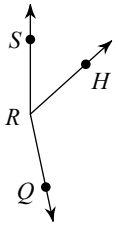
44) $m\angle SRN = 8x$, $m\angle NRQ = 42x + 5$, and $m\angle SRQ = 155°$. Find $m\angle NRQ$.



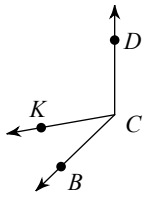
45) $m\angle FGH = 162°$, $m\angle TGH = 20x$, and $m\angle FGT = 3x + 1$. Find $m\angle TGH$.



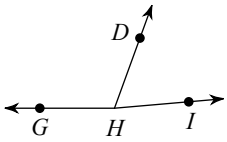
46) $m\angle HRQ = 120°$, $m\angle SRQ = 16x - 8$, and $m\angle SRH = 3x + 15$. Find $m\angle SRQ$.



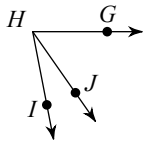
47) $m\angle BCK = 34°$, $m\angle BCD = 12x + 2$, and $m\angle KCD = 8x + 12$. Find $m\angle KCD$.



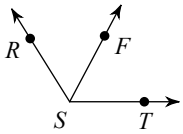
48) Find $m\angle GHI$ if $m\angle DHI = 5 + 5x$, $m\angle GHD = 110°$, and $m\angle GHI = 13x + 19$.



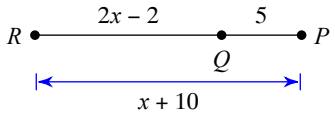
49) Find $m\angle GHJ$ if $m\angle GHJ = 6x - 5$, $m\angle GHI = 79°$, and $m\angle JHI = x + 14$.

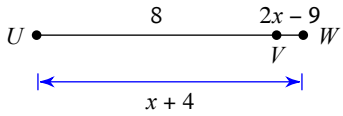


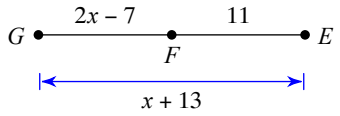
50) Find $m\angle RSF$ if $m\angle RSF = x + 70$, $m\angle RST = 122°$, and $m\angle FST = x + 72$.

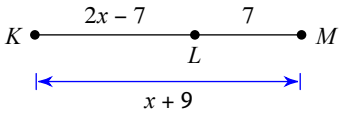


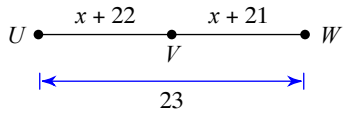
Solve for x.

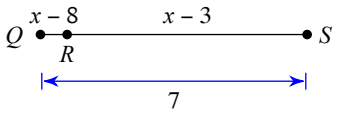
51) 

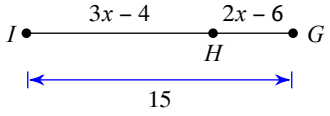
52) 

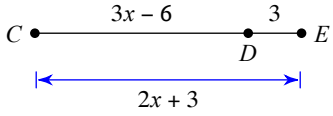
53) 

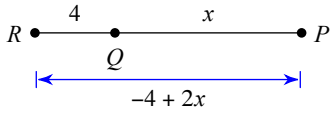
54) 

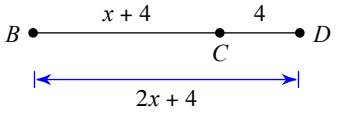
55) 

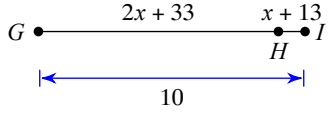
56) 

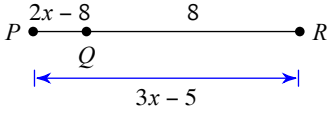
57) 

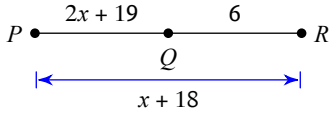
58) 

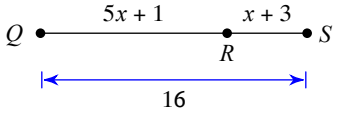
59) 

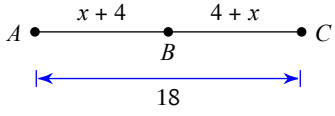
60) 

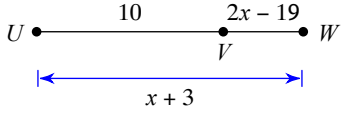
61) 

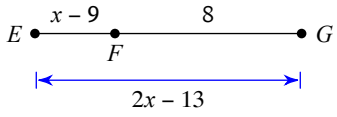
62) 

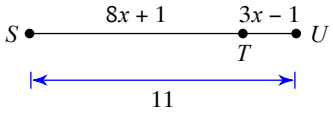
63) 

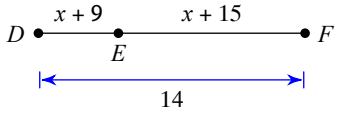
64) 

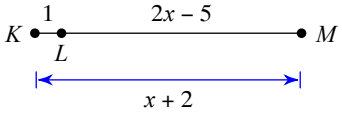
65) 

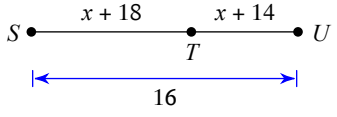
66) 

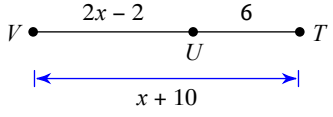
67) 

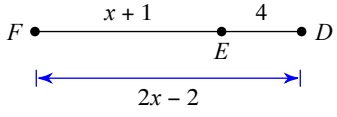
68) 

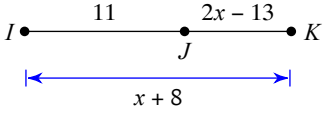
69) 

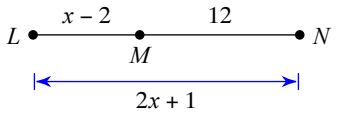
70) 

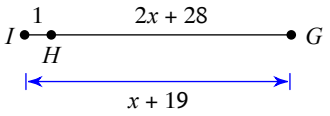
71) 

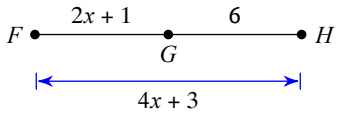
72) 

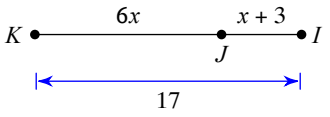
73) 

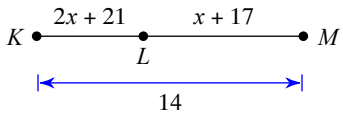
74) 

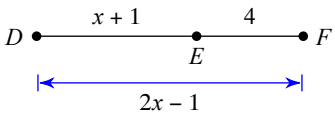
75) 

76) 

77) 

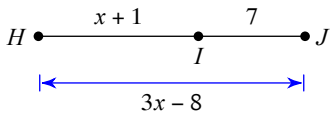
78) 

79) 

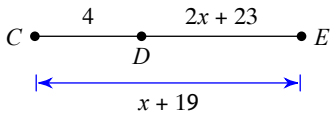
80) 

Find the length indicated.

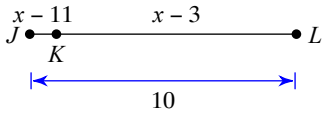
81) Find *HJ*



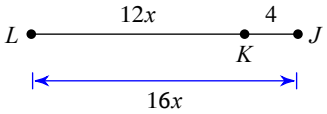
82) Find *CE*



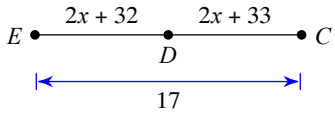
83) Find *JK*



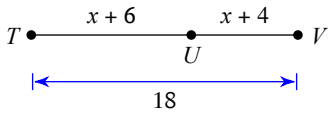
84) Find *LJ*



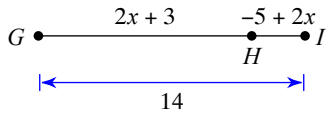
85) Find *DC*



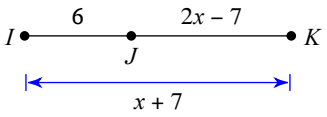
86) Find *UV*



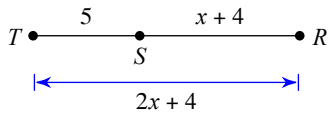
87) Find *HI*



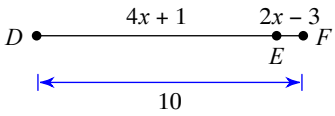
88) Find *JK*



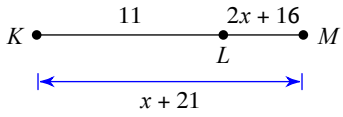
89) Find *SR*



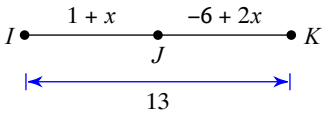
90) Find *DE*



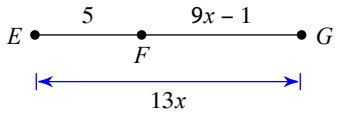
91) Find KM



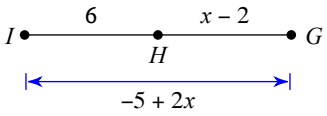
92) Find JK



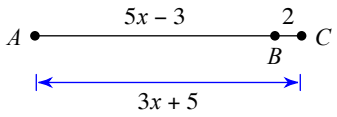
93) Find EG



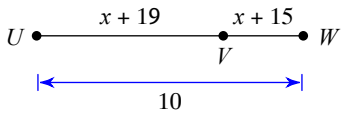
94) Find HG



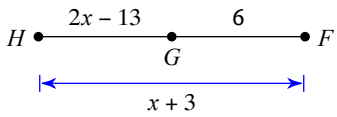
95) Find AC



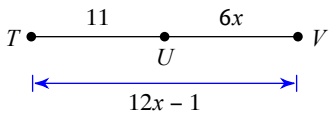
96) Find VW



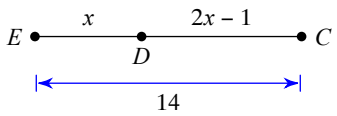
97) Find HG



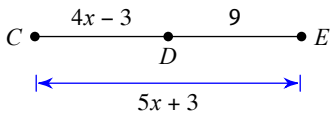
98) Find UV



99) Find DC



100) Find CE



Find the distance between each pair of points.

101) $(5, 5),\ (7, -7)$

102) $(-6, 8),\ (-4, 3)$

103) $(5, 2),\ (7, 6)$

104) $(8, 2),\ (0, 0)$

105) $(6, -6),\ (-6, 0)$

106) $(-8, 0),\ (-5, 2)$

107) $(-7, -7),\ (7, 1)$

108) $(4, -5),\ (-4, -2)$

109) $(-4, 0),\ (-1, 3)$

110) $(-8, 5),\ (3, -6)$

111) $(2, -6),\ (8, -1)$

112) $(-1, 2),\ (-2, -4)$

113) $(-6, -2), (8, 0)$

114) $(0, 0), (4, 5)$

115) $(-2, 8), (3, -2)$

116) $(-5, 8), (-7, 6)$

117) $(-4, -2), (1, 5)$

118) $(-3, -1), (-7, 1)$

119) $(1, 3), (8, 8)$

120) $(1, 8), (7, 0)$

121) $(3, 6), (5, 1)$

122) $(8, -7), (7, -1)$

123) $(4, 1), (5, 5)$

124) $(-2, 3), (-3, -2)$

125) $(8, -5), (8, 8)$

126) $(1, -3), (-3, 2)$

127) $(7, -1), (5, 7)$

128) $(-8, 0), (4, 3)$

129) $(-7, -1), (-6, -6)$

130) $(-1, -7), (0, -4)$

131) $(2, 2), (-3, 1)$

132) $(5, -7), (-3, 1)$

133) $(-3, -2), (-1, 4)$

134) $(-4, 7), (2, -7)$

135) $(4, 7), (2, 8)$

136) $(7, -4), (-3, 8)$

137) $(-2, -2), (4, 3)$

138) $(6, 8), (-6, -8)$

139) $(5, 2), (2, -3)$

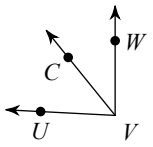
140) $(0, -1), (2, 6)$

Geometry Name_____ ID: 1

Assignment

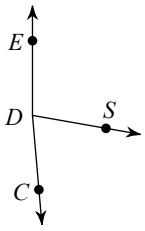
Date_____ Period____

1) $m\angle CVW = 39x$, $m\angle UVC = 48°$, and $m\angle UVW = 86x + 1$. Find x.



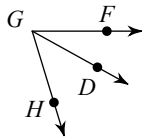
1

2) Find x if $m\angle EDC = 88x - 1$, $m\angle EDS = 100°$, and $m\angle SDC = 37x + 1$.



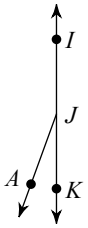
2

3) Find x if $m\angle DGH = 5x - 1$, $m\angle FGD = 4x - 7$, and $m\angle FGH = 73°$.



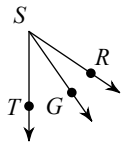
9

4) Find x if $m\angle AJI = 21x - 8$, $m\angle KJA = 20°$, and $m\angle KJI = 22x + 4$.



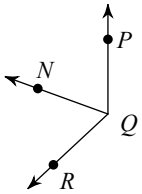
8

5) Find x if $m\angle GST = 7 + 4x$, $m\angle RSG = 21°$, and $m\angle RST = 8x$.



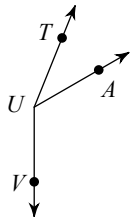
7

6) $m\angle RQP = 133°$, $m\angle NQP = 18x - 2$, and $m\angle RQN = -1 + 16x$. Find x.



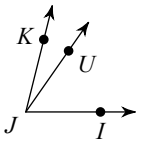
4

7) Find x if $m\angle AUV = x + 128$, $m\angle TUV = 158°$, and $m\angle TUA = x + 46$.



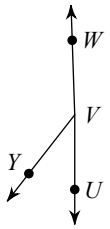
−8

8) $m\angle UJI = 55°$, $m\angle KJU = 6x - 3$, and $m\angle KJI = 20x - 4$. Find x.



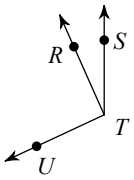
4

9) $m\angle UVY = 19x$, $m\angle YVW = 70x$, and $m\angle UVW = 178°$. Find x.



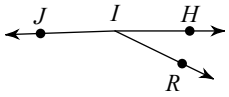
2

10) $m\angle UTR = 91°$, $m\angle UTS = 2x + 115$, and $m\angle RTS = x + 24$. Find x.



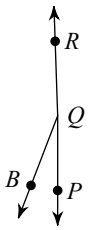
0

11) $m\angle HIJ = 15x - 2$, $m\angle RIJ = 152°$, and $m\angle HIR = 3x - 10$. Find x.



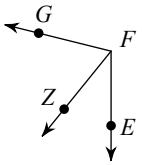
12

12) Find x if $m\angle BQR = 157°$, $m\angle PQB = 6x - 3$, and $m\angle PQR = 44x + 2$.



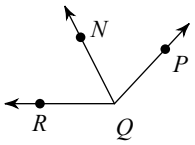
4

13) $m\angle ZFG = 65°$, $m\angle EFG = 7x + 20$, and $m\angle EFZ = 4x - 9$. Find x.



12

14) Find x if $m\angle NQP = 70°$, $m\angle RQN = 16x - 1$, and $m\angle RQP = 33x + 1$.

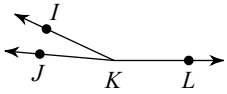


4

15) $m\angle BJK = 17x - 8$, $m\angle IJB = 2x + 4$, and $m\angle IJK = 167°$. Find x.

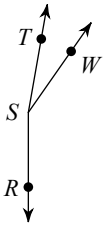
9

16) $m\angle IKL = 155°$, $m\angle JKI = 4x$, and $m\angle JKL = 36x - 5$. Find x.



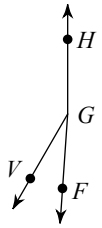
5

17) Find x if $m\angle TSR = 170°$, $m\angle TSW = x + 34$, and $m\angle WSR = 154 + x$.



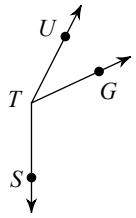
–9

18) $m\angle FGV = 2x + 4$, $m\angle VGH = 150°$, and $m\angle FGH = 17x - 11$. Find x.



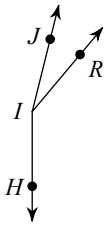
11

19) Find x if $m\angle UTS = 19x + 1$, $m\angle GTS = 115°$, and $m\angle UTG = 5x - 2$.



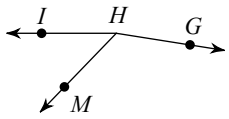
8

20) $m\angle RIH = 16x - 4$, $m\angle JIR = x + 17$, and $m\angle JIH = 166°$. Find x.



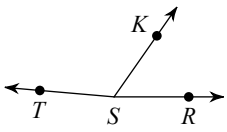
9

21) $m\angle GHI = 19x$, $m\angle GHM = 13x + 8$, and $m\angle MHI = 46°$. Find x.



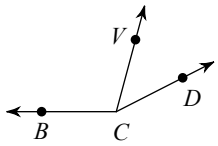
9

22) $m\angle TSR = 175°$, $m\angle TSK = 40x$, and $m\angle KSR = 17x + 4$. Find x.



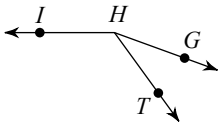
3

23) $m\angle BCV = x + 106$, $m\angle BCD = 153°$, and $m\angle VCD = x + 49$. Find x.



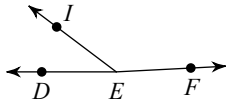
−1

24) Find x if $m\angle GHI = 33x - 5$, $m\angle THI = 126°$, and $m\angle GHT = 7x - 1$.



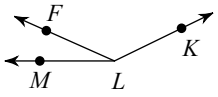
5

25) $m\angle DEF = 177°$, $m\angle DEI = x + 42$, and $m\angle IEF = x + 145$. Find x.



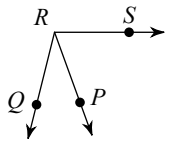
−5

26) Find x if $m\angle MLF = x + 25$, $m\angle FLK = x + 131$, and $m\angle MLK = 154°$.



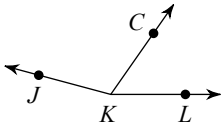
−1

27) Find x if $m\angle SRQ = 5 + 33x$, $m\angle PRQ = 11x + 1$, and $m\angle SRP = 70°$.



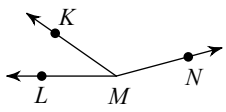
3

28) $m\angle JKL = 16x + 5$, $m\angle CKL = 6x - 5$, and $m\angle JKC = 110°$. Find x.



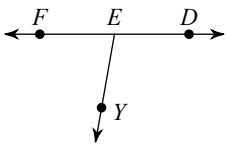
10

29) $m\angle LMK = 2x + 35$, $m\angle KMN = x + 130$, and $m\angle LMN = 165°$. Find x.



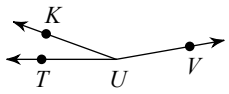
0

30) $m\angle YEF = 80°$, $m\angle DEY = 21x - 5$, and $m\angle DEF = 36x$. Find x.



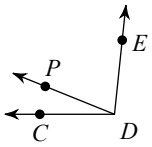
5

31) Find $m\angle KUV$ if $m\angle KUV = 15x + 15$, $m\angle TUV = 19x - 1$, and $m\angle TUK = 20°$.



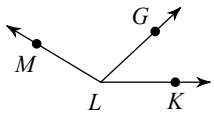
150°

32) Find $m\angle PDE$ if $m\angle CDP = x + 34$, $m\angle PDE = x + 86$, and $m\angle CDE = 96°$.



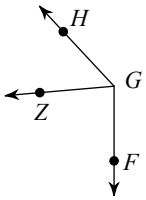
74°

33) Find $m\angle GLK$ if $m\angle GLK = x + 55$, $m\angle MLG = x + 118$, and $m\angle MLK = 149°$.



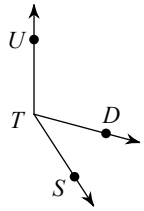
43°

34) $m\angle FGZ = 29x - 2$, $m\angle FGH = 44x + 5$, and $m\angle ZGH = 52°$. Find $m\angle FGZ$.



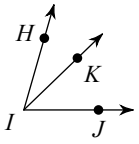
85°

35) $m\angle UTD = 105°$, $m\angle UTS = 13x + 4$, and $m\angle DTS = 2x + 20$. Find $m\angle DTS$.



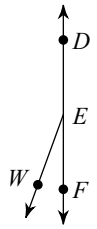
42°

36) Find $m\angle KIJ$ if $m\angle KIJ = 5x + 4$, $m\angle HIK = 2x + 14$, and $m\angle HIJ = 74°$.



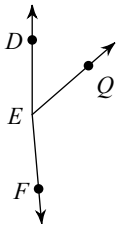
44°

37) $m\angle FED = 180°$, $m\angle WED = x + 164$, and $m\angle FEW = x + 24$. Find $m\angle WED$.



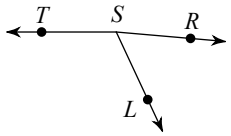
160°

38) $m\angle DEF = 30x - 5$, $m\angle QEF = 126°$, and $m\angle DEQ = 9x - 5$. Find $m\angle DEF$.



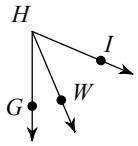
175°

39) Find $m\angle RST$ if $m\angle LST = 9x + 7$, $m\angle RSL = 60°$, and $m\angle RST = 15x - 5$.



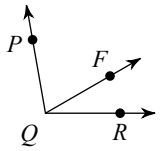
175°

40) Find $m\angle WHG$ if $m\angle IHG = 9x + 4$, $m\angle WHG = 3x + 2$, and $m\angle IHW = 44°$.



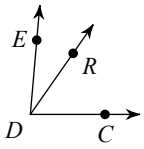
23°

41) Find $m\angle PQR$ if $m\angle FQR = 6x + 6$, $m\angle PQR = 26x - 4$, and $m\angle PQF = 70°$.



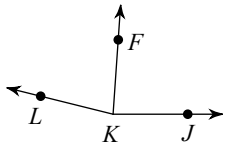
100°

42) Find $m\angle EDC$ if $m\angle EDR = 3x + 3$, $m\angle EDC = 8x + 13$, and $m\angle RDC = 55°$.



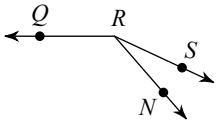
85°

43) Find $m\angle FKJ$ if $m\angle FKJ = 20x + 6$, $m\angle LKF = 80°$, and $m\angle LKJ = 40x + 6$.



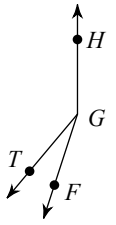
86°

44) $m\angle SRN = 8x$, $m\angle NRQ = 42x + 5$, and $m\angle SRQ = 155°$. Find $m\angle NRQ$.



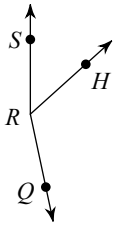
131°

45) $m\angle FGH = 162°$, $m\angle TGH = 20x$, and $m\angle FGT = 3x + 1$. Find $m\angle TGH$.



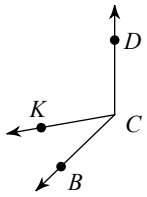
140°

46) $m\angle HRQ = 120°$, $m\angle SRQ = 16x - 8$, and $m\angle SRH = 3x + 15$. Find $m\angle SRQ$.



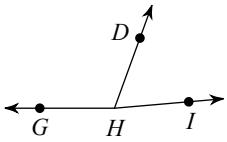
168°

47) $m\angle BCK = 34°$, $m\angle BCD = 12x + 2$, and $m\angle KCD = 8x + 12$. Find $m\angle KCD$.



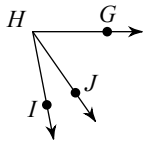
100°

48) Find $m\angle GHI$ if $m\angle DHI = 5 + 5x$, $m\angle GHD = 110°$, and $m\angle GHI = 13x + 19$.



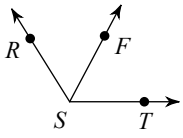
175°

49) Find $m\angle GHJ$ if $m\angle GHJ = 6x - 5$, $m\angle GHI = 79°$, and $m\angle JHI = x + 14$.



55°

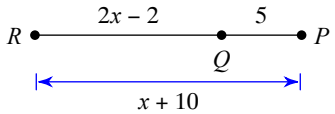
50) Find $m\angle RSF$ if $m\angle RSF = x + 70$, $m\angle RST = 122°$, and $m\angle FST = x + 72$.



60°

Solve for x.

51)



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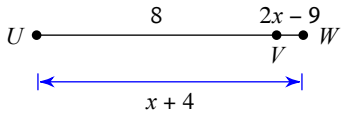

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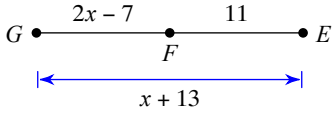
53) 

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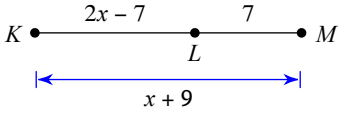
54) 

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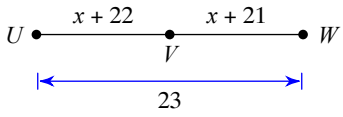
55) 

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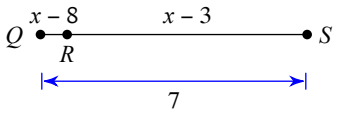
56) 

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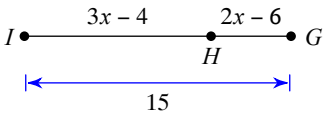
57) 

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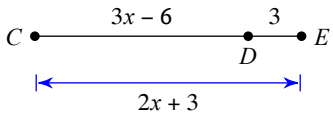
58) 

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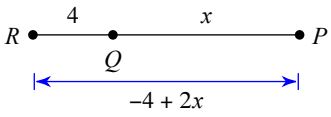
59) 

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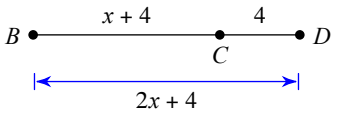
60) 

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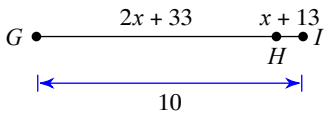
61) 

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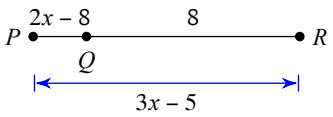
62) 

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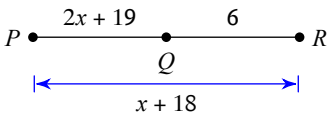
63) 

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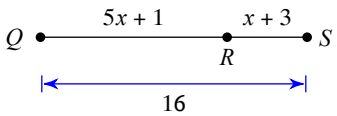
64) 

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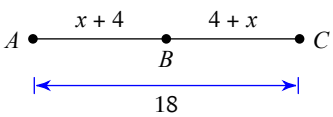
65) 

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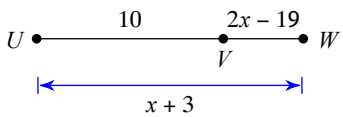
66) 

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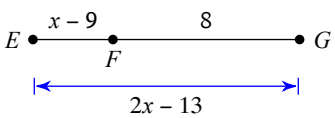
67) 

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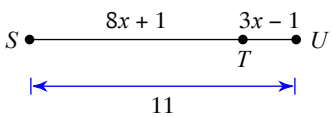
68) 

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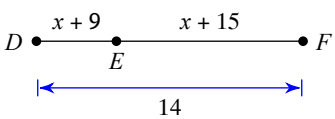
69) 

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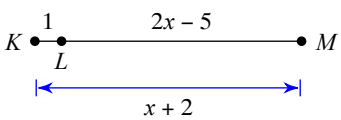
70) 

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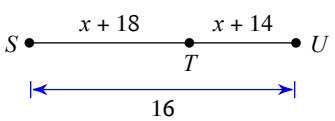
71) 

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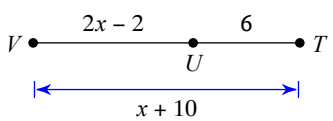
72) 

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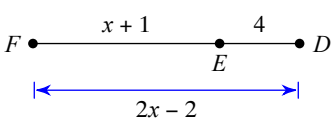
73) 

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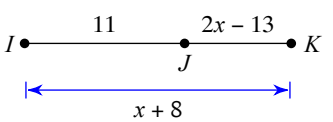
74) 

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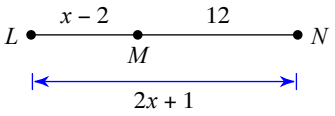
75) 

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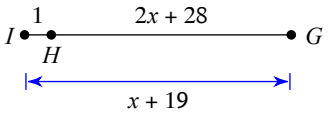
76) 

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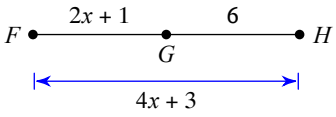
77) 

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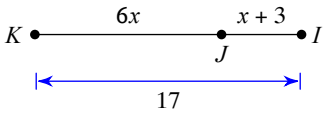
78) 

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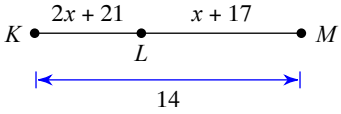
79) 

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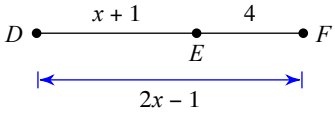
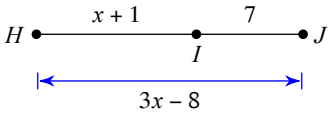
80) 

6

Find the length indicated.

81) Find *HJ*



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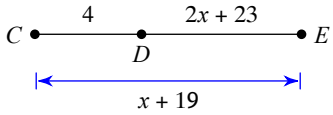
82) Find *CE*



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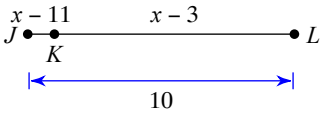
83) Find *JK*



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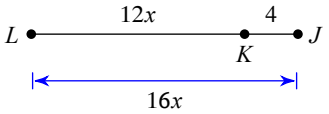
84) Find *LJ*



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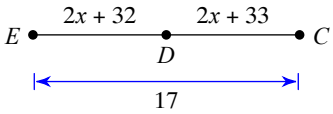
85) Find *DC*



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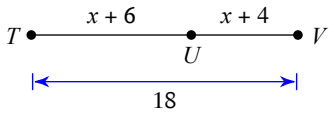
86) Find *UV*



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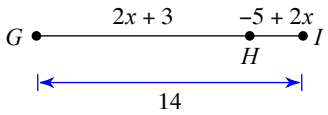
87) Find *HI*



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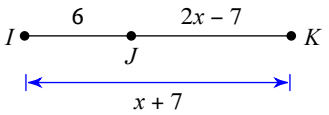
88) Find *JK*



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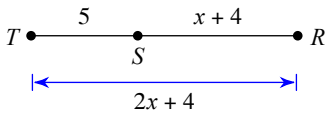
89) Find *SR*



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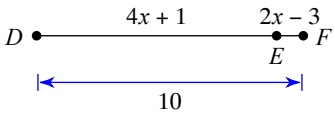
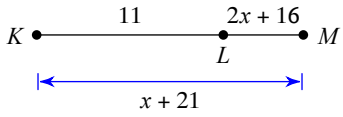
90) Find *DE*



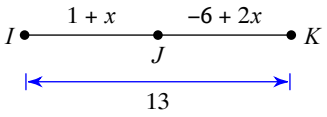
9

91) Find KM



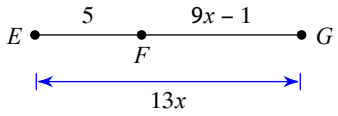
15

92) Find JK



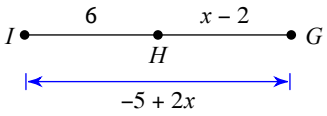
6

93) Find EG



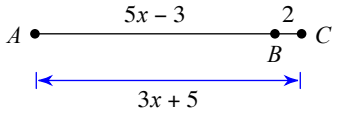
13

94) Find HG



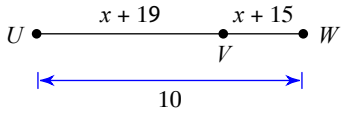
7

95) Find AC



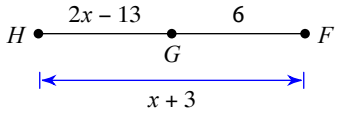
14

96) Find VW



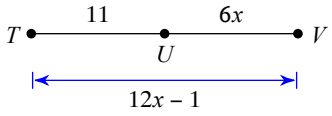
3

97) Find HG



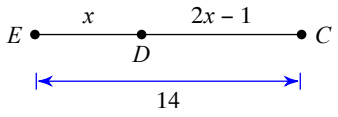
7

98) Find UV



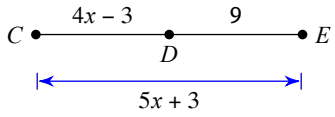
12

99) Find DC



9

100) Find CE



18

Find the distance between each pair of points.

101) $(5, 5)$, $(7, -7)$

$2\sqrt{37}$

102) $(-6, 8)$, $(-4, 3)$

$\sqrt{29}$

103) $(5, 2)$, $(7, 6)$

$2\sqrt{5}$

104) $(8, 2)$, $(0, 0)$

$2\sqrt{17}$

105) $(6, -6)$, $(-6, 0)$

$6\sqrt{5}$

106) $(-8, 0)$, $(-5, 2)$

$\sqrt{13}$

107) $(-7, -7)$, $(7, 1)$

$2\sqrt{65}$

108) $(4, -5)$, $(-4, -2)$

$\sqrt{73}$

109) $(-4, 0)$, $(-1, 3)$

$3\sqrt{2}$

110) $(-8, 5)$, $(3, -6)$

$11\sqrt{2}$

111) $(2, -6)$, $(8, -1)$

$\sqrt{61}$

112) $(-1, 2)$, $(-2, -4)$

$\sqrt{37}$

113) $(-6, -2)$, $(8, 0)$
$10\sqrt{2}$

114) $(0, 0)$, $(4, 5)$
$\sqrt{41}$

115) $(-2, 8)$, $(3, -2)$
$5\sqrt{5}$

116) $(-5, 8)$, $(-7, 6)$
$2\sqrt{2}$

117) $(-4, -2)$, $(1, 5)$
$\sqrt{74}$

118) $(-3, -1)$, $(-7, 1)$
$2\sqrt{5}$

119) $(1, 3)$, $(8, 8)$
$\sqrt{74}$

120) $(1, 8)$, $(7, 0)$
10

121) $(3, 6)$, $(5, 1)$
$\sqrt{29}$

122) $(8, -7)$, $(7, -1)$
$\sqrt{37}$

123) $(4, 1)$, $(5, 5)$
$\sqrt{17}$

124) $(-2, 3)$, $(-3, -2)$
$\sqrt{26}$

125) $(8, -5)$, $(8, 8)$
13

126) $(1, -3)$, $(-3, 2)$
$\sqrt{41}$

127) $(7, -1)$, $(5, 7)$
$2\sqrt{17}$

128) $(-8, 0)$, $(4, 3)$
$3\sqrt{17}$

129) $(-7, -1)$, $(-6, -6)$
$\sqrt{26}$

130) $(-1, -7)$, $(0, -4)$
$\sqrt{10}$

131) $(2, 2)$, $(-3, 1)$
$\sqrt{26}$

132) $(5, -7)$, $(-3, 1)$
$8\sqrt{2}$

133) $(-3, -2)$, $(-1, 4)$
$2\sqrt{10}$

134) $(-4, 7)$, $(2, -7)$
$2\sqrt{58}$

135) $(4, 7)$, $(2, 8)$
$\sqrt{5}$

136) $(7, -4)$, $(-3, 8)$
$2\sqrt{61}$

137) $(-2, -2)$, $(4, 3)$
$\sqrt{61}$

138) $(6, 8)$, $(-6, -8)$
20

139) $(5, 2)$, $(2, -3)$
$\sqrt{34}$

140) $(0, -1)$, $(2, 6)$
$\sqrt{53}$