Geometry A Name_____ ID: 1



# HW 1: Segment Addition Postulate and Angle Basics

Date_____ Period____

**Solve each equation.**

1) $112 = -8 + 8(1 + 7p)$

2) $95 = -5(6x + 5)$

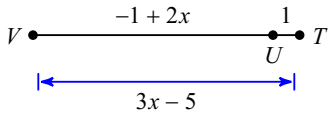
3) $-\frac{37}{6} = \frac{5}{3}n + \frac{1}{2} + n$

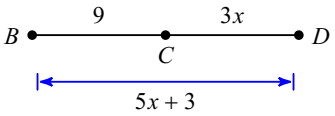
4) $\frac{3}{4}n + 1 + \frac{17}{4}n = \frac{17}{2}$

5) $-\frac{17}{6} - \frac{11}{6}\left(m - \frac{1}{3}\right) = -\frac{161}{36} - \frac{1}{3}m$

6) $7\left(\frac{25}{8}a + \frac{9}{8}\right) + \frac{25}{8}a = \frac{1151}{72} + \frac{2}{3}a$

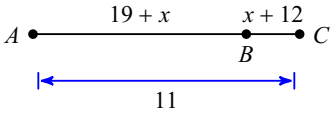
**Solve for *x*.**

7) 

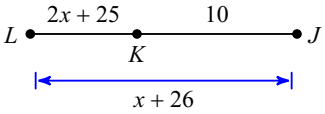

8) 


**Find the length indicated.**

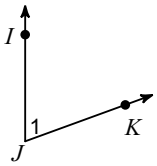
9) Find *BC*

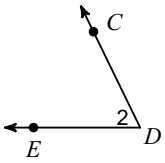



10) Find *LJ*

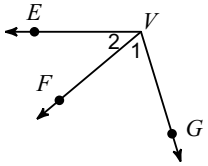


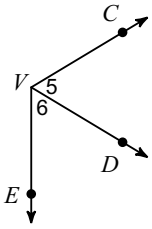

**Name each angle in four ways.**

11) 

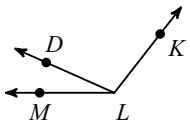

12) 


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

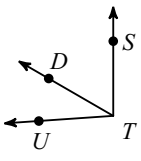
13) 


14) 

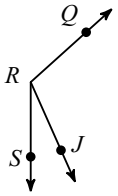

15) $m\angle DLK = 104°$ and $m\angle MLD = 24°$.
Find $m\angle MLK$.



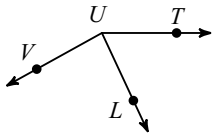

16) $m\angle DTS = 60°$ and $m\angle UTS = 94°$.
Find $m\angle UTD$.



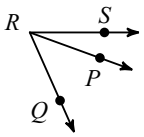
17) Find $x$ if $m\angle QRJ = 107x + 1$, $m\angle QRS = 132°$, and $m\angle JRS = 24x$.



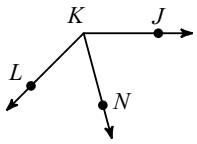

18) $m\angle TUL = 65°$, $m\angle LUV = 14x + 2$, and $m\angle TUV = 24x + 7$. Find $x$.



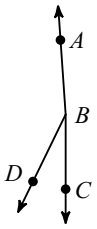

19) Find $x$ if $m\angle PRQ = -2 + 6x$, $m\angle SRP = 3x - 4$, and $m\angle SRQ = 66°$.



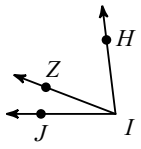

20) $m\angle JKN = 75°$, $m\angle NKL = 5x + 10$, and $m\angle JKL = 14x - 5$. Find $x$.



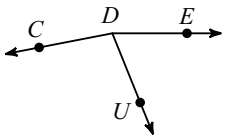

21) Find $x$ if $m\angle DBA = x + 158$, $m\angle CBA = 176°$, and $m\angle CBD = x + 34$.



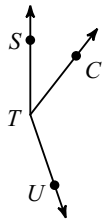

22) $m\angle JIZ = 2x + 3$, $m\angle JIH = 83°$, and $m\angle ZIH = 7x - 1$. Find $m\angle JIZ$.



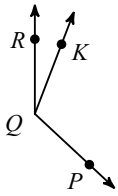

23) Find $m\angle EDU$ if $m\angle EDU = 80 + x$, $m\angle UDC = x + 113$, and $m\angle EDC = 169°$.



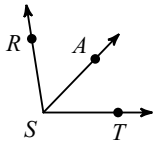

24) $m\angle CTU = x + 132$, $m\angle STU = 161°$, and $m\angle STC = x + 47$. Find $m\angle CTU$.




25) Find $m\angle RQK$ if $m\angle RQP = 15x + 13$, $m\angle KQP = 112°$, and $m\angle RQK = -3 + 3x$.




26) Find $m\angle RST$ if $m\angle AST = 46°$, $m\angle RSA = 5x + 3$, and $m\angle RST = 8x + 19$.



# Answers to HW 1: Segment Addition Postulate and Angle Basics (ID: 1)

1) $\{2\}$
2) $\{-4\}$
3) $\left\{-\frac{5}{2}\right\}$
4) $\left\{\frac{3}{2}\right\}$
5) $\left\{\frac{3}{2}\right\}$
6) $\left\{\frac{1}{3}\right\}$
7) 5
8) 3
9) 2
10) 17
11) $\angle J, \angle 1, \angle IJK, \angle KJI$
12) $\angle D, \angle 2, \angle EDC, \angle CDE$
13) $\angle 1, \angle 2, \angle GVE$
14) $\angle 5, \angle 6, \angle CVE$
15) 128°
16) 34°
17) 1
18) 6
19) 8
20) 10
21) −8
22) 21°
23) 68°
24) 123°
25) 21°
26) 99°