Topic 1 Worksheet **Name:** _____

Solve for each variable. Show **all** your work.

1) $3x - 5 = 90$

2) $5x + 10 + 6x - 3 = 180$

3) $4(2y - 1) = 17$

4) $8 = 10x + 40$

5) $3x - 7 + 11 - 4x = 29$

6) $30 = -3(5 - 2a)$

7) $2b + 3b - 10 = 20$

8) $7x + 10 = 4x - 8$

9) $5a - 2 = 11a - 12$

10) $4(3x - 1) = 24 + 5x$

11) $-2(3c - 4) = 4(5 + 6c)$

12) $3w + 40 - 5w + 2 = 3$

Topic 1 Worksheet continued on next page…

Topic 1 Worksheet, continued.

13) $2x + 17 - 9 + x = 5x - 1$

14) $3 - 2(x - 1) = 4(x + 6)$

Bonus problem #1: Solve for the variable: $\frac{3}{5}x + 4 = \frac{2}{5}x - 3(4x + 6)$

Bonus problem #2: Factor: $x^2 + 7x + 10$

Topic 2 Worksheet **Name:** _____

For #1-6: Simplify each rational expression (no decimal answers). Show your work.

1) $\sqrt{150}$

2) $\sqrt{72}$

3) $\sqrt{63}$

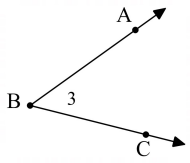
4) $2\sqrt{8}$

5) $\sqrt{540}$

6) $5\sqrt{24}$

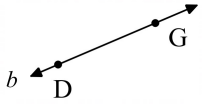
For #7 – 15: name each shape in as many ways as possible.

7) the angle shown below (4 ways)

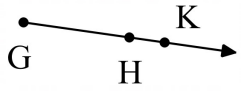


8) the segment shown below (2 ways)

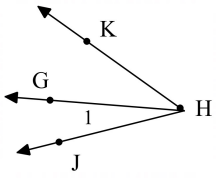
9) the line shown below (3 ways)



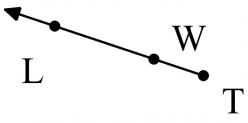
10) the ray shown below (2 ways)



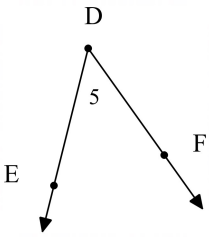
11) ∠1 as shown below (2 ways)



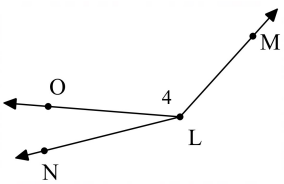
12) the ray shown below (2 ways)



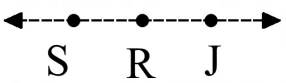
13) the angle shown below (4 ways)



14) ∠4 as shown below (2 ways)



15) the line shown below (6 ways)



Topic 2 Worksheet continued on next page…

Topic 2 Worksheet, continued.

16) Which options below are *not* valid ways to name ∠7? Select all that apply.

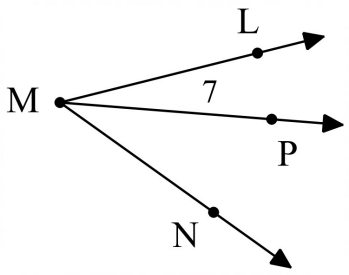
A. $\angle M$

B. $\angle LMP$

C. $\angle NML$

D. $\angle LPM$

E. $\angle PML$



For # 17 – 24, Use the coordinate system provided. Plot each point, and LABEL each one with the problem number.

17) (-3, 5)

18) (2, 7)

19) (0, 2)

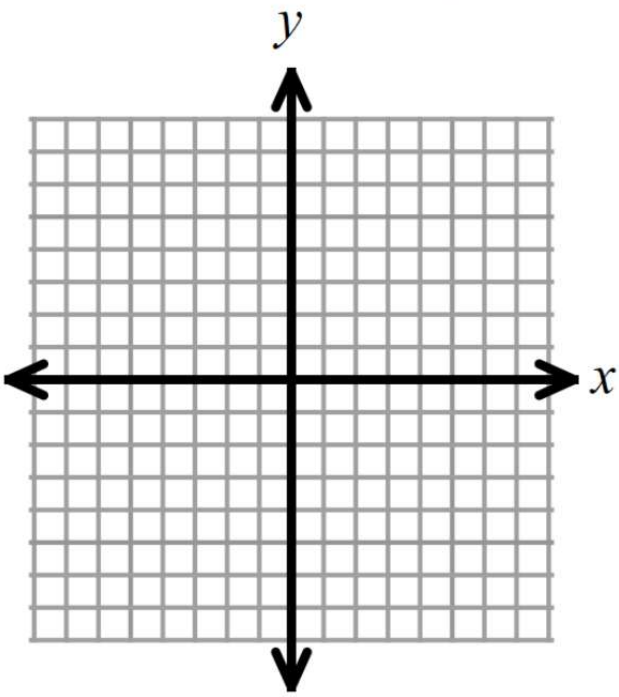
20) (-3, 0)

21) (0, -6)

22) (4, 0)

23) (-6, -6)

24) (2, -5)



25) What quadrant is the point from #17 in?

26) What quadrant is the point from #18 in?

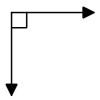
27) What quadrant is the point from #23 in?

28) What quadrant is the point from #24 in?

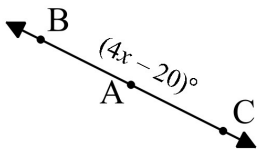
1.1 Worksheet

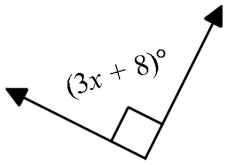
Name: _____

For #1 – 5: classify each angle as *acute, right, obtuse, or straight*. No work is needed for these problems.

1) 35° 2) 180° 3) 122° 4) 90° 5) 

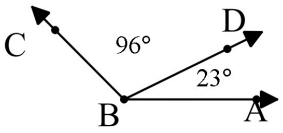
For #6 – 7: solve each equation for the variable. Work must be shown.

6) 

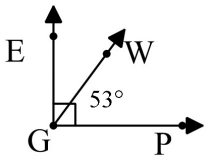
7) 

For #8 – 13: solve for the requested angle measure. Show your work.

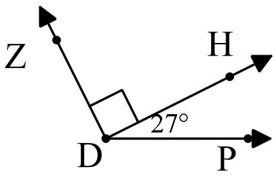
8) Find $m\angle ABC$.



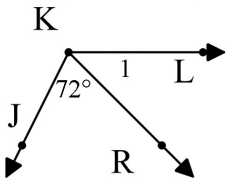
9) Find $m\angle EGW$.



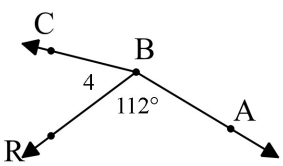
10) Find $m\angle ZDP$.



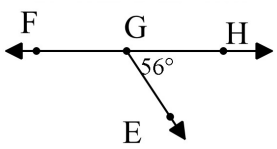
11) Find $m\angle 1$ if $m\angle JKL = 100°$.



12) Find $m\angle 4$ if $m\angle CBA = 160°$.



13) Find $m\angle EGF$.

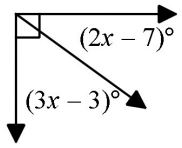


1.1 Worksheet continued on next page…

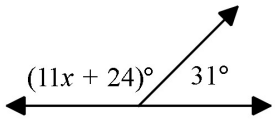
1.1 Worksheet, continued.

For #14 – 16: find the value of the variable.

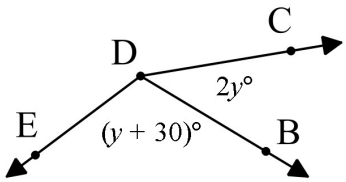
14)



15)



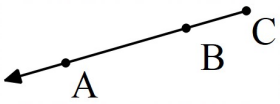
16) $m\angle EDC = 171°$



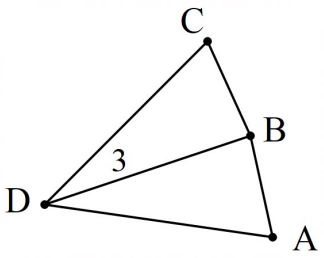
17) Solve: $7b - 20 = 3 + 2(4b - 1)$

18) Simplify: $-3\sqrt{80}$

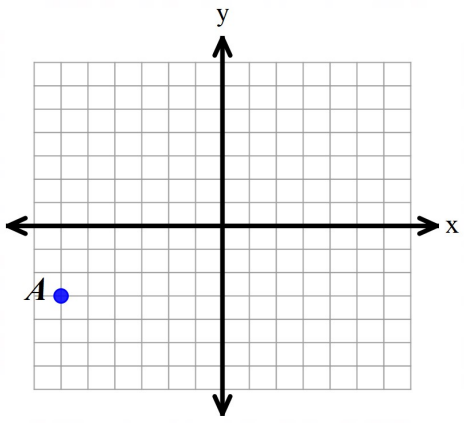
19) Name the ray below in 2 ways.



20) Name ∠3 below in as many ways as possible.



21) Name the coordinates of point A below.



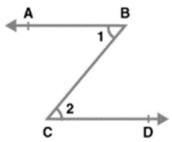
22) What quadrant is point A in (from #21)?

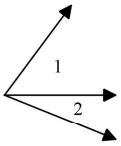
1.2 Worksheet

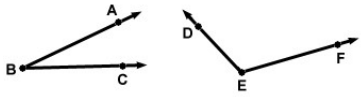
Name: _____

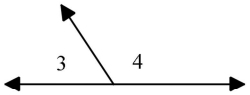
1) The following statement is false. Correct the statement so that it is a true statement for *adjacent angles.*
"If two angles are adjacent, then they share a common endpoint but do not share any rays."

2) Which pair(s) of angles below show adjacent angles? Choose all that apply.

A) 

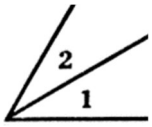
B) 

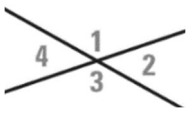
C) 

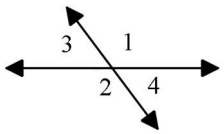
D) 

For # 3 – 5: MATCH each angle pair relationship for ∠1 and ∠2 to the correct diagram.

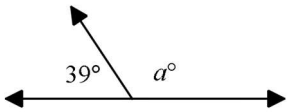
3) vertical angles _____ 4) linear pair _____ 5) adjacent angles that are not a linear pair _____

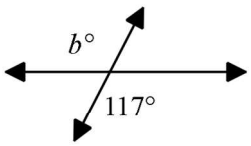
A) 

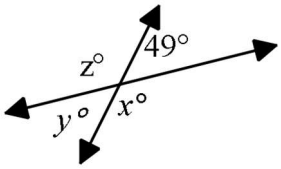
B) 

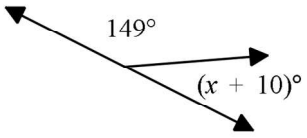
C) 

For #6 – 13: solve for the variable(s). Show your work!

6) 

7) 

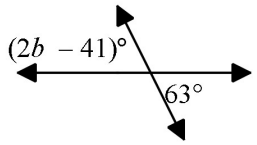
8) 

9) 

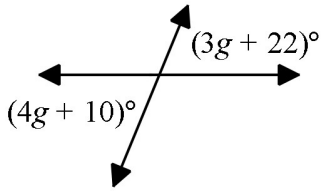
1.2 Worksheet continued on next page…

1.2 Worksheet, continued…

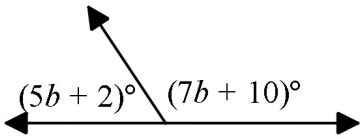
10)



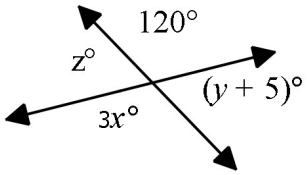
11)



12)



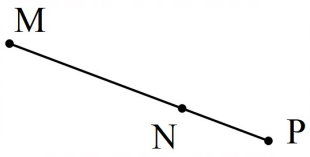
13)



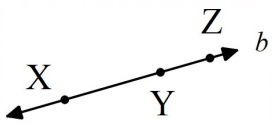
14) Solve the equation: $-4(2-3b)+11=5b+3(b-1)$

15) Simplify: $7\sqrt{24}$

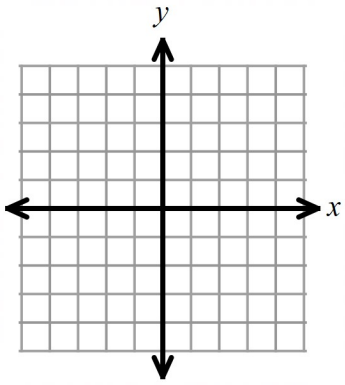
16) Name the segment below (2 ways).



17) Name the line below (7 ways).



18) Point the point $(0,-3)$ on the graph below.



19) Which quadrant is $(2,-5)$ in?

1.3 Worksheet

Name: _____

For #1 – 4: describe each pair of angles as *complementary, supplementary,* or *neither.*
Show work to justify your conclusion.

1) 20° and 70°

2) 30° and 30°

3) 140° and 40°

4) 90° and 90°

For #5 – 8: find the *complement* **of each angle, if possible. Show your work.**

5) 71°

6) 28°

7) 143°

8) 45°

For #9 – 12: find the *supplement* **of each angle, if possible. Show your work.**

9) 80°

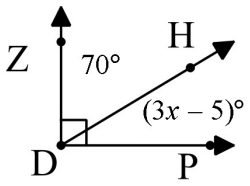
10) 20°

11) 159°

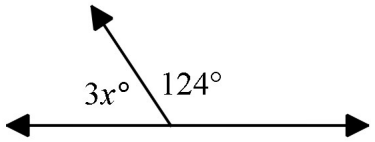
12) 245°

For #13 – 15, find the value of each variable. Show your work.

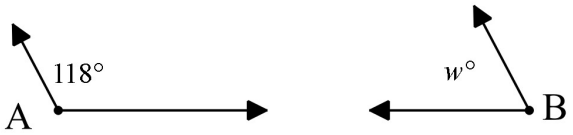
13)



14)



15) $\angle A$ and $\angle B$ are supplementary, find $w°$.



16) $\angle C$ and $\angle D$ are complementary. If $m\angle C = (6x - 1)°$ and $m\angle D = (2x + 11)°$, then find x. Show work!

1.3 Worksheet continued on next page…

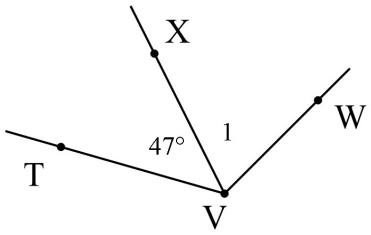
1.3 Worksheet, continued…

17) $\angle E$ and $\angle F$ are supplementary. If $m\angle E = (4x + 5)°$ and $m\angle F = (x - 40)°$, then find x. Show work!

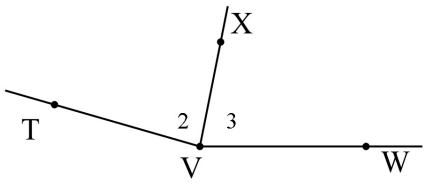
BONUS: Find the measure of $\angle E$ and $\angle F$, from #17 … Show work!

For #18 and 19, find the measure of the requested angle(s). Show your work!

18) Find $m\angle 1$ and $m\angle TVW$ if ray $\overrightarrow{VX}$ bisects $\angle TVW$.

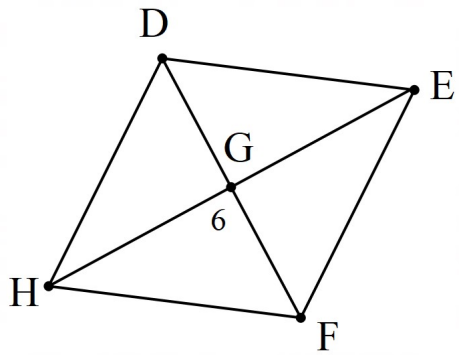


19) Find $m\angle 2$ and $m\angle 3$ if $m\angle TVW = 170°$ and ray $\overrightarrow{VX}$ bisects $\angle TVW$.



20) Which items below are valid ways to name ∠6? **Select all that apply.**

A) $\angle G$
B) $\angle HGF$
C) $\angle EGF$
D) $\angle FGH$
E) $\angle HFG$
F) $\angle FHG$



Chapter 1 Review **Name:** _____

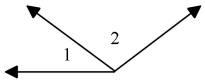
For #1 – 6, match each term with the angle(s) that meet that description. Only use each answer once.

1) acute angle
2) straight angle
3) obtuse angle
4) right angle
5) supplementary angles
6) complementary angles

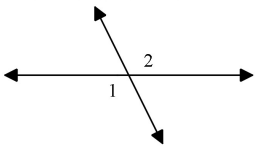
A) 90°
B) 130°
C) 20° and 70°
D) 15°
E) 60° and 120°
F) 180°

For #7 – 9, describe the relationship between angles 1 and 2 as vertical, adjacent, or a linear pair. Hint: one term will be used twice; one problem has *two correct answers.*

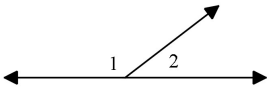
7)



8)

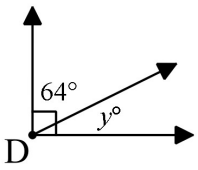


9)

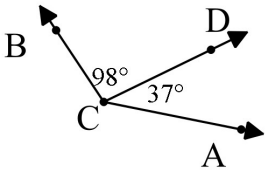


For #10 – 20, find the requested value(s) in each diagram.

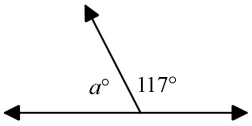
10) Find y.



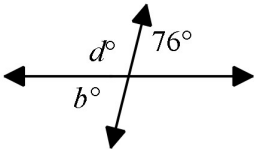
11) Find $m\angle ACB$.



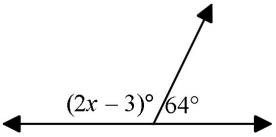
12) Find a.



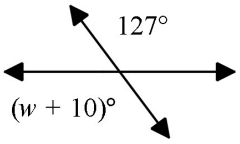
13) Find b and d.



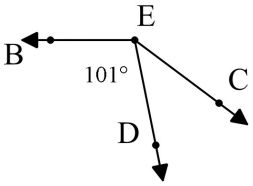
14) Find x.



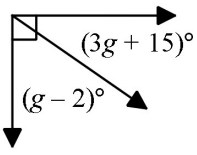
15) Find w.



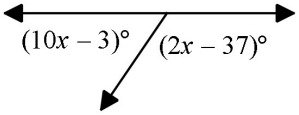
16) Find $m\angle CED$ if $m\angle BEC = 150°$.



17) Find g.



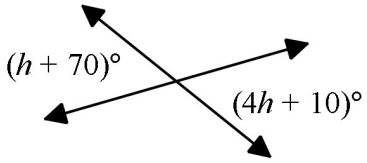
18) Find x.



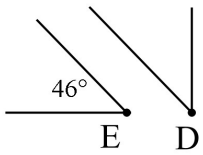
Ch 1 Review Worksheet continued on the next page….

Ch 1 Review Worksheet, continued…

19) Find h.

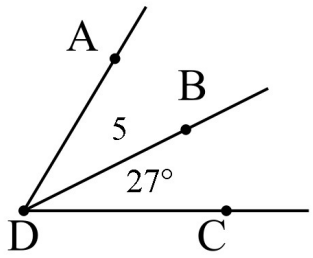


20) Find $m\angle D$ if $\angle D$ is comp to $\angle E$.

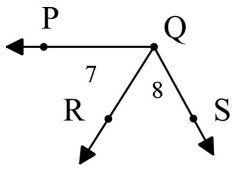


21) $\angle E$ is supplementary to $\angle B$. If $m\angle E = (x + 64)°$ and $m\angle B = (3x - 12)°$, then find x.

22) Given that DB bisects $\angle ADC$, as shown, then find $m\angle 5$ and $m\angle ADC$.



23) Given that $\overrightarrow{QR}$ bisects $\angle SQP$, as shown, and that $m\angle SQP = 110°$, then find $m\angle 7$ and $m\angle 8$.



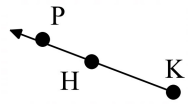
Simplify each radical expression.

24) $\sqrt{52}$

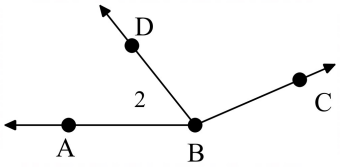
25) $4\sqrt{20}$

For #26 – 29: name each shape in as many names as possible.

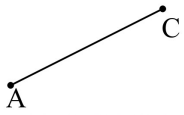
26) the ray shown



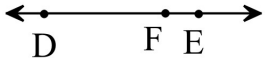
27) $\angle 2$



28) the segment shown



29) the line shown



For #30 – 31: Solve each equation.

30) $4(3x - 7) + 20 = -6x + 12$

31) $-20 + 5x = 1 - 4x$

32) Plot the point $(-2, 0)$ on the graph provided.

33) What quadrant is the point $(-2, 3)$ in?