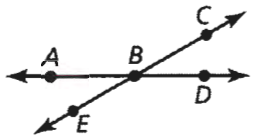
Name Answers Date

Review – Special Pairs of Angles

Name two pairs of adjacent angles and two pairs of vertical angles in the figure.

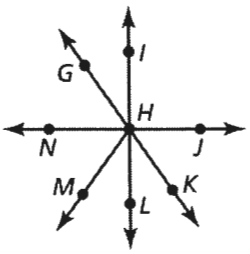
1)



∠ABC + ∠CBD
∠ABE + ∠EBD

∠ABC + ∠EBD
∠ABE + ∠CBD

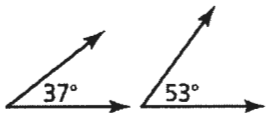
2)



A lot...

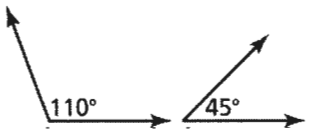
Tell whether the angles are *complementary*, *supplementary*, or *neither*.

3)



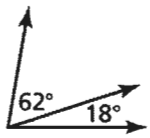
Complementary

4)



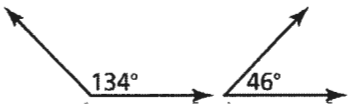
Neither

5)



Neither

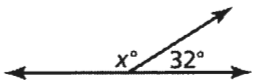
6)



Supplementary

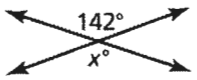
Tell whether the angles are *complementary, supplementary* or *vertical*. Then find the value of x. Show all algebraic work if

7)



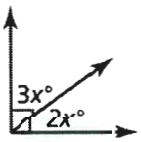
Supplementary
$x + 32 = 180$
$-32 \quad -32$
$x = 148°$

8)



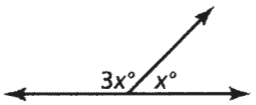
Vertical
$x = 142°$

9)

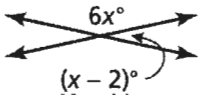


Complementary
$3x + 2x = 90$
$\frac{5x}{5} = \frac{90}{5}$
$x = 18$

10)



Supplementary
$3x + x = 180$
$\frac{4x}{4} = \frac{180}{4}$
$x = 45$

11) 

Supplementary

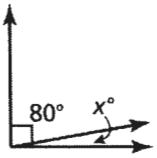
$6x + (x-2) = 180$

$7x - 2 = 180$

$+2 \quad +2$

$7x = 182$

$\boxed{x = 26°}$

12) 

Complementary

$x + 80 = 90$

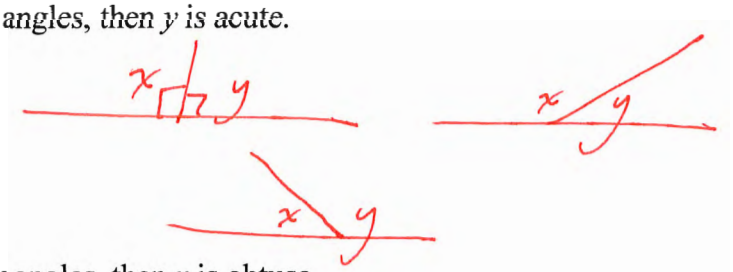
$-80 \quad -80$

$\boxed{x = 10}$

Tell whether the statement is *always*, *sometimes*, or *never* true. Explain.

13) If x and y are supplementary angles, then y is acute.

Sometimes.



14) If x and y are complementary angles, then x is obtuse.

Never. Complementary angles add up to 90°. However, obtuse angles are greater than 90°

15) Angle x and angle y are complementary. Angle x is supplementary to a 128° angle. What are the measures of angle x and angle y?

$x + 128 = 180$

$-128 \quad -128$

$\boxed{x = 52°}$

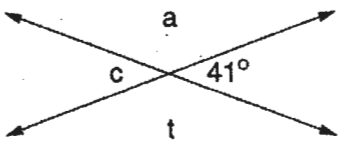
$x + y = 90$

$52 + y = 90$

$-52 \quad -52$

$\boxed{y = 38°}$

16) Find all the missing angles.



$m\angle a = 139°$

$m\angle c = 41°$

$m\angle t = 139°$