Name : _____

Missing Coordinates

Sheet 1

Find the missing coordinate using the given slope.

1) (6, 9) and (u, –4)
Slope = $\frac{13}{9}$

$\frac{-4-9}{u-6} = \frac{13}{9}$

$-117 = 13(u-6)$
$-117 = 13u - 78$
$-39 = 13u$

u = -3

2) (a, 2) and (5, –6)
Slope = 8

$\frac{-6-2}{5-a} = \frac{8}{1}$

$-8 = 8(5-a)$
$-8 = 40 - 8a$
$-48 = -8a$

a = 6

3) (2, n) and (0, 8)
Slope = –2

$\frac{8-n}{0-2} = \frac{-2}{1}$

$4 = 8 - n$
$-4 = -n$

n = 4

4) (5, 4) and (10, c)
Slope = $-\frac{2}{5}$

$\frac{c-4}{10-5} = \frac{-2}{5}$

$-10 = 5(c-4)$
$-10 = 5c - 20$
$10 = 5c$
$2 = c$

c = 2

5) (g, 6) and (–5, –9)
Slope = $\frac{3}{2}$

$\frac{-9-6}{-5-g} = \frac{3}{2}$

$-30 = 3(-5-g)$
$-30 = -15 - 3g$
$-15 = -3g$

g = 5

6) (1, h) and (4, 8)
Slope = 1

$\frac{8-h}{4-1} = 1$

$3 = 8 - h$
$-5 = -h$

h = 5

7) (1, –1) and (–5, z)
Slope = $-\frac{4}{3}$

$\frac{z-(-1)}{-5-1} = \frac{-4}{3}$

$24 = 3(z+1)$
$24 = 3z + 3$
$21 = 3z$

z = 7

8) (s, –7) and (3, –10)
Slope = $\frac{1}{2}$

$\frac{-10-(-7)}{3-s} = \frac{-1}{2}$

$-6 = -(3-s)$
$-6 = -3 + s$
$-3 = s$

s = -3

9) (7, 3) and (t, –7)
Slope = –5

$\frac{-7-3}{t-7} = \frac{-5}{1}$

$-10 = -5(t-7)$
$-10 = -5t + 35$
$-45 = -5t$

t = 9

10) (y, –8) and (10, 4)
Slope = 3

$\frac{4-(-8)}{10-y} = \frac{3}{1}$

$12 = 3(10-y)$
$12 = 30 - 3y$
$-18 = -3y$

y = 6

11) (–4, –10) and (–2, p)
Slope = $\frac{5}{2}$

$\frac{p-(-10)}{-2-(-4)} = \frac{5}{2}$

$10 = 2(p+10)$
$10 = 2p + 20$
$-10 = 2p$

p = -5

12) (–5, v) and (–8, 3)
Slope = –1

$\frac{3-v}{-8-(-5)} = \frac{-1}{1}$

$3 = 3 - v$
$0 = -v$
$0 = v$

v = 0