1. Find the coordinates of the point S.



2. Find the coordinates of the point U.



- 3. In what quadrant does the point (-1, 3) lie?
- 4. Graph on an xy-coordinate system: 2x 3y = 8
- 5. Graph on an *xy*-coordinate system: $\frac{2}{5}x + \frac{3}{5}y = 1$
- 6. Graph on an *xy*-coordinate system: y = -6
- 7. Graph on an xy-coordinate system: x = 0
- 8. Graph the vertical line through the point (3.5, 1.7) and find the equation of this vertical line.
- 9. Graph the line $y = \frac{3}{2}x 3$ using a table of values.
- 10. Graph the line $y = \frac{3}{2}x 3$ using the slope and y-intercept.
- 11. Find the x-intercept and y-intercept of the line x y = 5.

MATD 0370 ELEMENTARY ALGEBRA REVIEW FOR TEST 2 - Extra handout

- 12. Find the x-intercept and y-intercept of the line 7x + 2y = -12.
- 13. What is the slope of any horizontal line?
- 14. What is the slope of any vertical line?
- 15. Find the slope and y-intercept of the line 5x + 3y = -6.
- 16. Find the slope of the line that contains the points (1, 3) and (-8, -3).
- 17. Find the slope of the line that contains the points (-5, -8) and (-7, 2).
- 18. Find the equation of the line which passes through the point (-1, -3) and has a slope of -4. Write your final equation in slope—intercept form.
- 19. Find the equation of the line which passes through the point (-4, 6) and has a slope of $\frac{2}{3}$. Write your final equation in slope–intercept form or another form. Graph the line.
- 20. Find the equations of the horizontal line and vertical line that pass through the point (-3, 1).
- 21. Find the equation of the line which passes through the points (1, -5) and (-1, 3). Write your final equation in slope-intercept form or another form.
- 22. Find the equation of the line which passes through the points (4, 2) and (-2, -7). Write your final equation in slope-intercept form or another form.
- 23. Find the equation of the line which passes through the point (1,5) that is parallel to the line y = 2x 4.
- 24. Find the equation of the line which passes through the point (-2,7) that is perpendicular to the line y = 2x + 1.

ANSWERS:

- 1. (-4, 0)
- 2. (4, -5)
- 3. Quadrant II
- 4.



5.



6.



7.



ANSWERS (CONTINUED):

8. Equation of Vertical Line: x = 3.5





9.

Table Of Values (Answers May Vary):

х	У
-2	-6
0	-3
2	0



slope: $\frac{3}{2}$

y-intercept: (0, -3)



12. x-intercept:
$$(-\frac{12}{7}, 0)$$
, y-intercept: $(0, -6)$

- 13. slope: 0
- 14. slope: undefined
- 15. slope: $m = -\frac{5}{3}$ y-intercept: (0, -2)
- 16. $\frac{2}{3}$
- 17. –5
- 18. y = -4x 7
- 19. $y = \frac{2}{3}x + \frac{26}{3}$ or $(y 6) = \frac{2}{3}(x + 4)$ (either form is fine)
- 20. Horizontal Line: y = 1Vertical Line: x = -3

21.
$$y = -4x - 1$$
 or $(y + 5) = -4(x - 1)$ or $(y - 3) = -4(x + 1)$ (any of these is fine)

22.
$$y = \frac{3}{2}x - 4$$
 or $(y - 2) = \frac{3}{2}(x - 4)$ or $(y + 7) = \frac{3}{2}(x + 2)$ (any of these is fine)

23.
$$(y-5) = 2(x-1)$$
 or $y = 2x + 3$ (either form is fine)

24.
$$(y - 7) = -\frac{1}{2}(x + 2)$$
 or $y = -\frac{1}{2}x + 6$ (either form is fine)