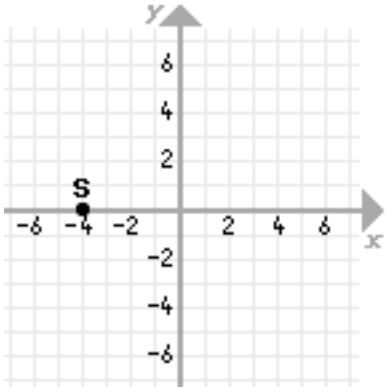
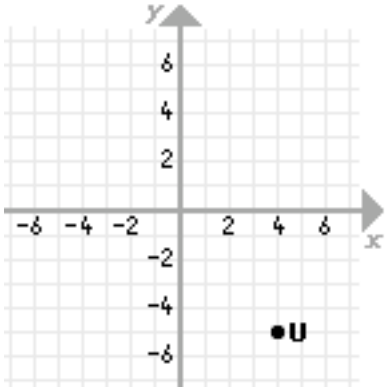
Test 2 may include review problems from earlier sections so restudy the test 1 review also (especially solving equations and percentage problems).

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 $x - y = 5$.

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
$y = 2x + 1$.

25. Find the distance between the following two points: (-2,4) and (3,-7)

26. Find the length of one of the diagonals of a rectangle whose length is 4 inches and width is 5 inches.

27. A 12 foot long ladder is leaning against a wall. If the base of the ladder is 2 feet from the wall, how high up the wall does the ladder reach?

28. Solve for the variable and graph the solution on a number line: $13y - 4 \leq 14y + 8$

29. Solve for the variable and graph the solution on a number line: $-2x < -10$

30. Solve for the variable and graph the solution on a number line: $9 + c > -2$

31. Solve for the variable and graph the solution on a number line: $16p < -10$

32. Solve for v and graph the solution: $v - 4 \geq 3(6 + 2v)$

Also, be sure to review the extra homework assignment handouts for this test.

MATD 0370 ELEMENTARY ALGEBRA REVIEW FOR TEST 2 (1.1 - 4.2)

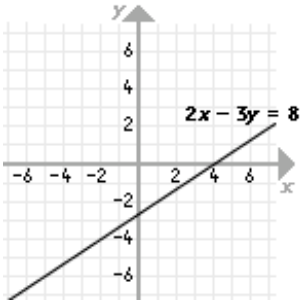
ANSWERS:

1. (–4, 0)

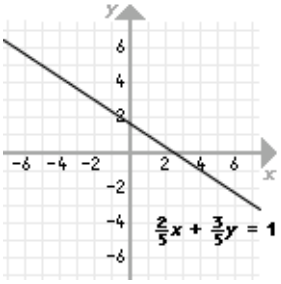
2. (4, –5)

3. Quadrant II

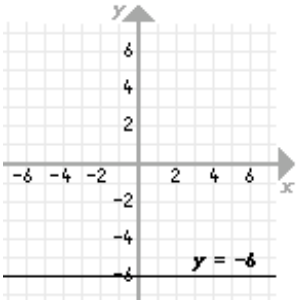
4.



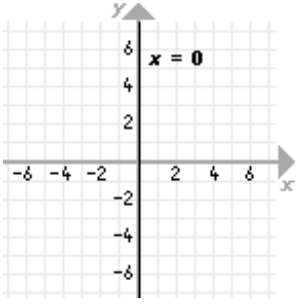

5.




6.

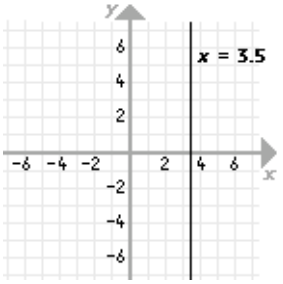



7.



ANSWERS (CONTINUED):

8. Equation of Vertical Line: x = 3.5




9. $y = \frac{3}{2}x - 3$

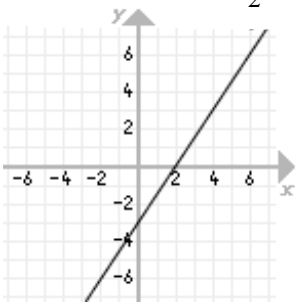
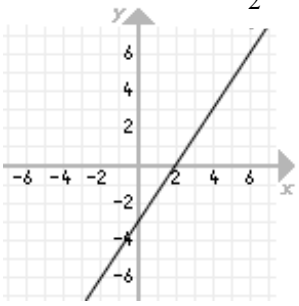



Table Of Values (Answers May Vary):

| x | y |
|---|---|
| –2 | –6 |
| 0 | –3 |
| 2 | 0 |

10. $y = \frac{3}{2}x - 3$




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

y–intercept: (0, –3)

11. x-intercept: (5, 0), y-intercept: (0, –5)

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: $y = 1$
Vertical 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)

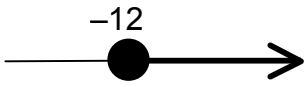
23. $(y - 5) = 2(x - 1)$ or $y = 2x + 3$ (either form is fine)

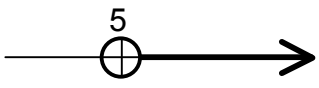
24. $(y - 7) = -\frac{1}{2}(x + 2)$ or $y = -\frac{1}{2}x + 6$ (either form is fine)

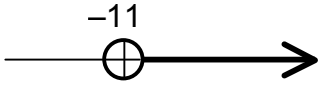
25. $\sqrt{146}$ or approximately 12.08

26. $\sqrt{41}$ or approximately 6.4 inches

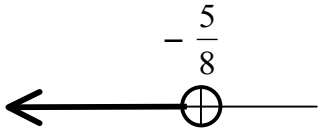
27. $\sqrt{140}$ or approximately 11.83 (or 11.8) inches

28. $y \geq -12$ 


29. $x > 5$ 

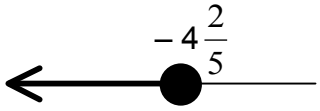

30. $c > -11$ 

31. $p < -\frac{5}{8}$




(NOTE: $-\frac{5}{8}$ is between 0 and –1, slightly closer to –1)

32. $v \leq -\frac{22}{5}$




(NOTE: $-\frac{22}{5}$, or $-4\frac{2}{5}$, is between –4 and –5, slightly closer to –4)