## Smarter Balance Practice Test

## Answer Section

### MULTIPLE CHOICE

1. ANS: C
2. ANS: C
3. ANS: A
4. ANS: B
5. ANS: B
6. ANS: B
7. ANS: D
8. ANS: B

### MULTIPLE RESPONSE

9. ANS: B, E

   - ☐ $AB = BD$
   - ☑ $AD = AB$
   - ☐ $AC = BX$
   - ☐ $m\angle ABC \neq 90°$
   - ☑ $m\angle AXB = 90°$

   Rubric: (1 point) The student selects the statements that must be true.

### COMPLETION

10. ANS: $4x^2 - 6x$ *or* $-6x + 4x^2$

11. ANS:
    Ratio of 21/29
    Students have a popup calculator pad in order to enter answer.

12. ANS:
    $x = \frac{250}{5}$ answer or equivalent. However, do not accept x=50 only per SB

    Answer must be in equation format, which means at least one variable.

13. ANS:
    5
    Rubric: (1 point) The student enters the number of used video games that Janet can purchase.

14. ANS: $b^7$

15. ANS:
0.3 or 3/9
Rubric: The student enters the correct rate of change.

16. ANS:
2
Rubric: Student enters the correct number of weeks.

17. ANS:
Part A: 7.5*h* > 200 or equivalent
Part B: 27 or *h* = 27
Rubric: (2 points) The student enters the correct inequality and value.
(1 point) The student enters the correct inequality or correct value. OR The student enters the correct answers in the wrong box.

18. ANS: $E = 6.5x + 0.04y$ or equivalent

19. ANS:
Key: Part A: 15 Part B: 8
Rubric: (1 point) The student enters the correct number of t-shirts in the first response box and the correct number of hats in the second box.

**MATCHING**

20. ANS: C
21. ANS: B
22. ANS: A
23. ANS: B
24. ANS: A
25. ANS: B
26. ANS: A
27. ANS: B
28. ANS: B
29. ANS: B
30. ANS: A
31. ANS: A
32. ANS: A
33. ANS: B
34. ANS: B
35. ANS: B
36. ANS: A
37. ANS: A
38. ANS: B

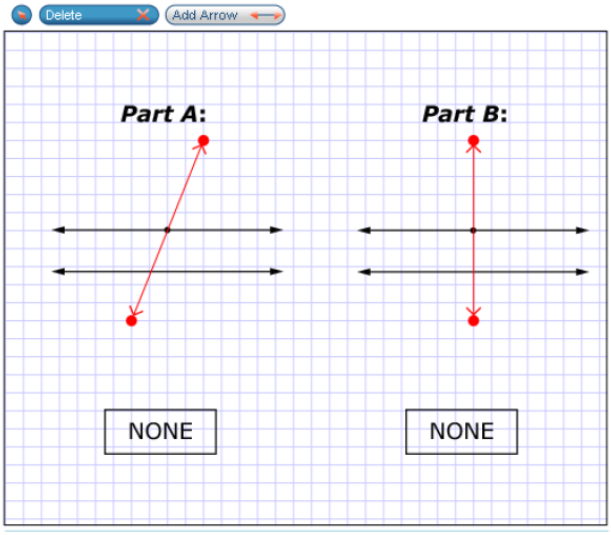
**OTHER**

39. ANS: Example:
Part A: a pair of parallel lines cut by transversal that is not perpendicular to the parallel lines.

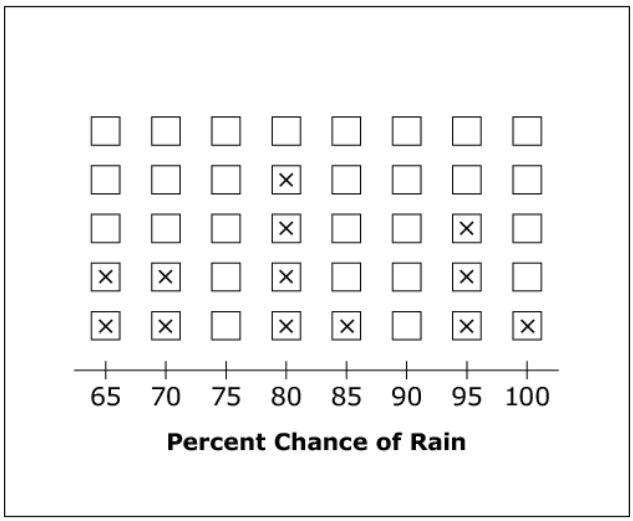
Part B: a pair of parallel lines cut by perpendicular transversal

Rubric: (2 points) Student draws correct transversals for Part A and Part B.

(1 point) Student draws correct transversal for Part A or Part B.




40. ANS: Example
Rubric: (1 point) The student clicks the bottom two boxes of 65, two boxes of 70, four boxes of 80, one box of 85, three boxes of 95, and one box of 100.



41. ANS: Example
Rubric: (2 points) The student selects Step 3 in Part A and indicates –6 as the correct response in Part B.
(1 point) The student gets Part A or Part B correct, but not both.

**Part A**

Step 1: $2(x + 9) = 4(x + 7) + 2$

Step 2: $2x + 18 = 4x + 28 + 2$

Step 3: $2x + 18 = 4x + 26$

Step 4: $-8 = 2x$

Step 5: $-4 = x$

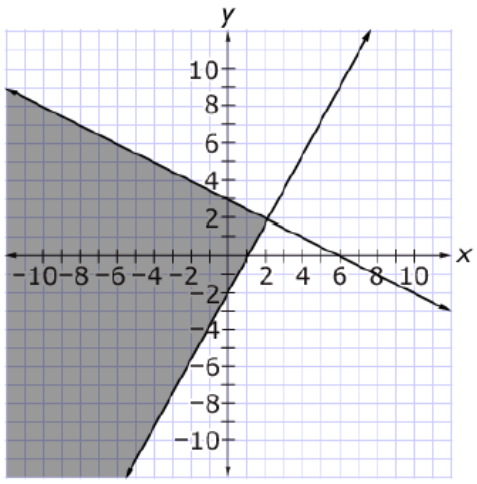
**Part B**

–10.5 [–6] –2 0 2 4.5 8

42. ANS:

| | $f(n) = 6^{(n-1)}$; $n \geq 1$ | $f(n) = 12 + 6n$; $n \geq 1$ | $f(n) = 12^{(n-1)}$; $n \geq 1$ | $f(n) = 6 + 12n$; $n \geq 1$ |
|---|---|---|---|---|
| $f(1) = 18$; $f(n) = f(n-1) + 6$; $n \geq 2$ | ☐ | ☑ | ☐ | ☐ |
| $f(1) = 18$; $f(n) = f(n-1) + 12$; $n \geq 2$ | ☐ | ☐ | ☐ | ☑ |
| $f(1) = 1$; $f(n) = 6f(n-1)$; $n \geq 2$ | ☑ | ☐ | ☐ | ☐ |
| $f(1) = 1$; $f(n) = 12f(n-1)$; $n \geq 2$ | ☐ | ☐ | ☑ | ☐ |

43. ANS:
Rubric: (1 point) The student correctly selects the region containing the solution set.



44. ANS:
Key: Part 1: Step 1 Part 2: $y = 4$ (or 4) Rubric: (1 point) The student enters the step where the mistake occurs and enters the correct solution.

45. ANS:

| | Standard Deviation | Median | Mean |
|---|---|---|---|
| **Increased** | ☑ | ☐ | ☐ |
| **Decreased** | ☐ | ☐ | ☑ |
| **Could Not Be Determined** | ☐ | ☑ | ☐ |

46. ANS:
Sample Example Responses (3 points):
Yes, triangle ABC is congruent to triangle OGE. To show this, first notice that sides AB and DC are congruent because they are opposite sides of a rectangle. Similarly, side AC is congruent to side DE because they are opposite sides of a parallelogram. To complete the proof, we show that angles BAG and COE are congruent. To see this, first notice that angles BAC and ACO are congruent because they are opposite interior angles for the parallel lines AB and DC. Also, angles AGO and COE are congruent because they are opposite interior angles for the parallel lines AC and OE. So by transitive property, angles BAG and COE are congruent. Therefore, triangles ABC and OGE are congruent by SAS congruence.
OR
Yes, triangle ABC is congruent to triangle OCE. Because ABCO is a rectangle, the diagonal AC splits the rectangle into two congruent triangles ABC and GOA. Similarly, because ACED is a parallelogram, the diagonal CO splits the parallelogram into two congruent triangles COA and OGE. Therefore, by transitive property of congruence, triangle ABC is congruent to triangle OGE.
Rubric:
(3 points) Student shows an understanding of how to prove that two triangles are congruent. AND Student proves that ? .ABC and ? .DCE are congruent starting from the properties of rectangles and parallelograms and ending with a valid demonstration of congruence. Note: Proofs do not need to be formal, but they should address all of the necessary steps to get from the given information (rectangle and parallelogram) to a valid demonstration of congruence (SAS, SSS, ASA, AAS, RHS or the Transitive Property of Congruence).
(2 points) Student shows an understanding of how to prove that two triangles are congruent. AND Student's demonstration of the congruence of ? .ABC and ? .DCE is flawed; either
? They attempt all three essential parts of the proof (SAS, SSS, ASA, AAS, RHS) but one of the three is incomplete, or
? They show that both ? .ABC and ? .DCE are congruent to ? .CDA, but do not explain why this makes them congruent to each other.

(1 point) Student shows an understanding of how to determine whether two triangles are congruent. Note: If a response receives only one point, it must come from reasoning.
(0 points) Student describes an incorrect understanding of congruency OR Student attempts to demonstrate the congruence of some parts of the figure, but their response does not show any understanding of what it takes to demonstrate the congruence of triangles. Note: Showing that only one or two of the three necessary lines/angles are congruent, without either attempting the third or describing a valid criteria for congruence, does not indicate sufficient reasoning for credit.

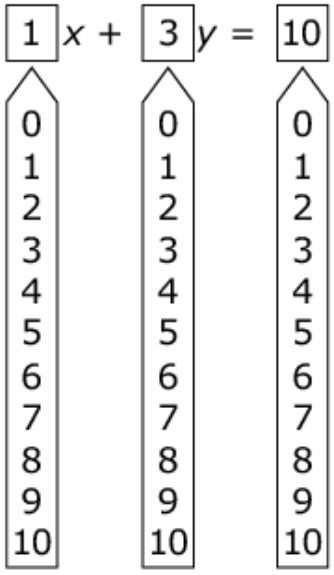
47. ANS:

Rubric: (1 point) Student correctly matches each function to the domain for which it is defined.

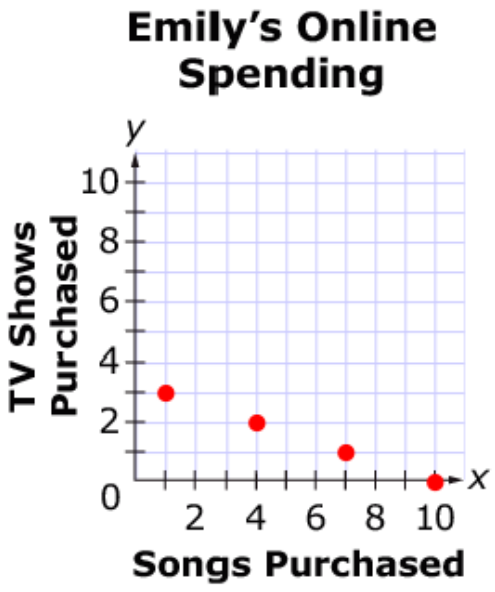
| | All real numbers | $x \neq 0$ | $x \neq 4$ | $x \neq -4$ |
|---|---|---|---|---|
| $f(x) = \frac{x+4}{x}$ | ☐ | ☑ | ☐ | ☐ |
| $f(x) = \frac{x}{x+4}$ | ☐ | ☐ | ☐ | ☑ |
| $f(x) = x(x+4)$ | ☑ | ☐ | ☐ | ☐ |
| $f(x) = \frac{4}{x^2+8x+16}$ | ☐ | ☐ | ☐ | ☑ |

48. ANS:

**Part A**

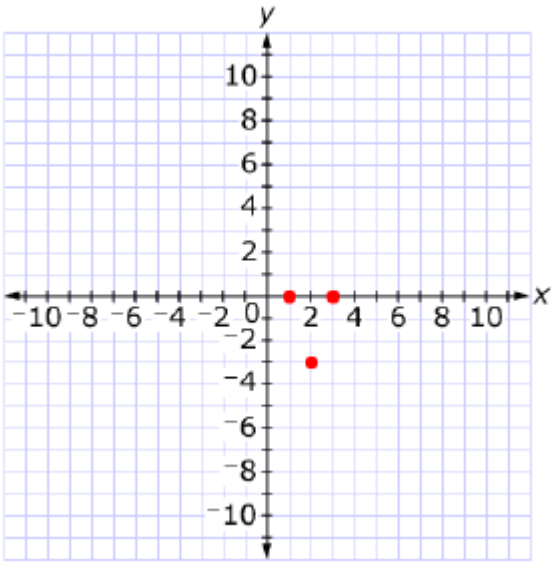



**Part B**




Rubric: (2 points) The student creates the equation $1x + 3y = 10$ (or equivalent) and plots only the points (10, 0), (7, 1), (4, 2), and (1, 3).
(1 point) The student creates the equation $1x + 3y = 10$ (or equivalent) OR plots only the points (10, 0), (7, 1), (4, 2), and (1, 3). Note: The student may leave the response box in front of the $x$ to be blank as an assumed 1.

49. ANS:




Rubric: (2 points) Part A: The student correctly plots the *x*-intercepts (with no other *x*-intercepts plotted).
Part B: The student correctly plots the minimum (with no other points not on the *x*-axis plotted).
(1 point) The student gets Part A or Part B correct, but not both.