6.EE.B

Reason about and solve one-variable equations and inequalities.

1. Select **all** equations that have *y* = 2 as a solution.

A. 7 $×$ *y* = 14
B. *y* $÷$8 = 4
C. 3 – *y* = 1
D. *y* + 10 = 12

1. Candice is building a rectangular piece of a fence according to the plans shown. One of the angles is not labeled. What is the value of *x*?


2. Rita makes cakes for a bakery. On Monday she had orders for 32 cakes. Rita knows she needs at least 4 days to make all 32 cakes. Write an inequality to represent the number of cakes Rita makes each day, *d*.
3. Examine the tape diagram shown, and write the equation it represents. Then, use the equation to determine the value of *q*.


4. On the number line, graph all the solutions to the inequality *x* $\leq $ 2.



6.EE.B

Reason about and solve one-variable equations and inequalities.

1. Select the set of numbers that are solutions to the inequality *x* > 4.

A. {–5, 8, 18}
B. {5, 8, 18}
C. {5, –8, 18}
D. {5, 8, –18}
2. Write an equation that represents the statement “*The product of a number, n, and 8.4 is 21*.” Then solve the equation to determine the value of *n*.
3. In the following inequalities, *w*, x, *y*, and *z* are integers.

*w* > *x
x* $\leq $ *y*z > *w*Determine whether each inequality is Always True, Sometimes True, or Never True.

|  | **Always True** | **Sometimes True** | **Never True** |
| --- | --- | --- | --- |
| *z* > x |  |  |  |
| *w* < *y* |  |  |  |

**Teacher Material**

6.EE.B

Reason about and solve one-variable equations and inequalities.

| **Question** | **Claim** | **Key/Suggested Rubric** |
| --- | --- | --- |
| 1[[1]](#footnote-1) | 1 | **1 point:** Selects A, C, and D |
| 2[[2]](#footnote-2) | 2 | **1 point:** 41 |
| 3[[3]](#footnote-3) | 4 | **1 point:** 4*d* ≤ 32, or equivalent |
| 4[[4]](#footnote-4) | 1 | **2 points:** 7*q* = 70, or equivalent AND 10**1 point:** 7*q* = 70, or equivalent OR 10 |
| 5[[5]](#footnote-5) | 1 | **1 point:** A number line labeled with integers from -10 to 10. A solid black dot is placed at 2 and a solid line and arrow is point to the left on the number line from 2 to -10. |
| 65 | 1 | **1 point:** Selects B |
| 71 | 1 | **2 points:** 8.4*n* = 21, or equivalent AND 2.5**1 point:** 8.4*n* = 21, or equivalent OR 2.5 |
| 85 | 3 | **1 point:**

|  | **Always True** | **Sometimes True** | **Never True** |
| --- | --- | --- | --- |
| *z* > x | **x** |  |  |
| *w* < *y* |  | **x** |  |

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1. From Smarterbalanced.org. Grade 6, Claim 1, Target F Item Specifications. Internet. Available from <http://www.smarterbalanced.org/smarter-balanced-assessments/>; accessed 11/2015. [↑](#footnote-ref-1)
2. From EngageNY.org of the New York State Education Department. Grade 6 Mathematics Module 4, Topic H, Lesson 30. Internet. Available from <https://www.engageny.org/resource/grade-6-mathematics-module-4-topic-h-lesson-30>; accessed 11/2015. [↑](#footnote-ref-2)
3. From EngageNY.org of the New York State Education Department. Grade 6 Mathematics Module 4, Topic H, Lesson 34. Internet. Available from <https://www.engageny.org/resource/grade-6-mathematics-module-4-topic-h-lesson-34>; accessed 11/2015. [↑](#footnote-ref-3)
4. From EngageNY.org of the New York State Education Department. Grade 6 Mathematics Module 4, Topic G, Lesson 27. Internet. Available from <https://www.engageny.org/resource/grade-6-mathematics-module-4-topic-g-lesson-27>; accessed 11/2015. [↑](#footnote-ref-4)
5. Adapted from the Mathematics K–12 Learning Standards. Internet. Available from <http://www.k12.wa.us/Mathematics/Standards.aspx>; accessed 11/2015. [↑](#footnote-ref-5)