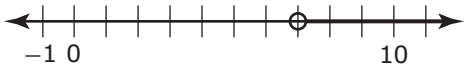
Chapter 9 BLM Answers

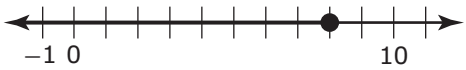
BLM 9–1 Chapter 9 Problems of the Week

1. a)



b)

c)

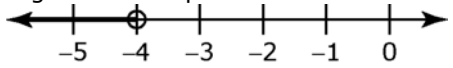


d)

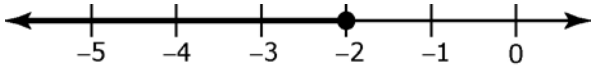
2. a) *Statement*: $2x + 3 < 9 - x$; *Solution*: $x < 2$
b) *Statement*: $4x - 2 \leq -10$; *Solution*: $x \leq -2$
c) *Statement*: $-5x + 3 = -x + 15$;
Solution: $x = -3$

BLM 9–2 Section 9.1 Extra Practice

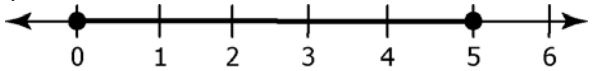
1. a) *m* is greater than negative 2.
b) A number is less than negative 2.
c) A number is greater than negative 2 and less than or equal to 2.
d) *m* is greater than or equal to 2.
2. a) False. A closed circle indicates that the boundary point is a possible value.
b) True
c) False. A boundary point is shown on a number line using either an open circle or a closed circle.
3. b)



c) $t < -4$, where *t* is the temperature.
4. a) Answers will vary. Example: The temperature of a town that is never warmer than 2 ºC.
b)

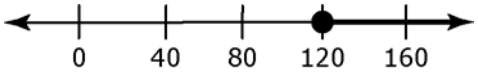


5. a) Answers will vary. Example: The number of players for a game that requires more than two people to play.
c) $p > 2$, where *p* is the number of players
6. a) Answers will vary. Example: The number of people that can fit in a car that seats five.
b)



BLM 9–4 Section 9.2 Extra Practice

1. a) −4 or any number less than −4. Examples: −4, −5, −6
b) Any number greater than −3. Examples: −2, −1, 0
c) Any number between −4 and 3, not including −4 and 3: −3, −2, −1, 0, 1, or 2
d) Any number between −2 and 5, including −2 and 5: −2, −1, 0, 1, 2, 3, 4, or 5
2. a) $x \leq 7$ **b)** $11 > x$ or $x < 11$ **c)** $x \geq -1.2$
d) $x < 7.7$ **e)** $x \leq -4$ **f)** $x < -13$ **g)** $x \leq -20$
h) $x \leq -12$
3. a) NO **b)** NO **c)** NO **d)** NO **e)** YES **f)** NO
4. a) $0.15b \geq 18$, where *b* is the number of balloons in the package.
b) $b \geq 120$
c) The number of balloons in a package is 120 balloons or more.



5. a) $5(x + 2) \leq 25$ **b)** $x \leq 3$ **c)** YES. The value of *x* must be greater than −2 or the length of the rectangle would not exist.

BLM 9–5 Section 9.3 Extra Practice

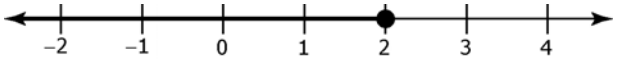
1. Example: Substitute the boundary point to check that both sides are equal.

Left Side	Right Side
$\frac{x}{2} - 2$	6
$\frac{16}{2} - 2$	6
$8 - 2$	6
6	6

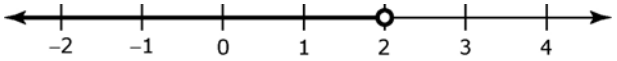
Then, substitute one other number from the solution to determine if it makes the inequality true.

$$\frac{x}{2} - 2 \leq 6$$
$$\frac{-6}{2} - 2 \leq 6$$
$$-3 - 2 \leq 6$$
$$-5 \leq 6$$

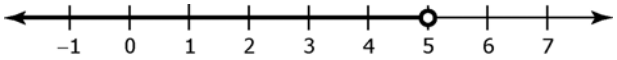
2. a) $x > 3$ **b)** $x < -0.45$ **c)** $x > 5$ **d)** $x \geq -2$
3. a) $x \leq 2$



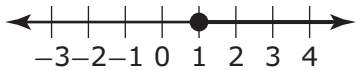
b) $x < 2$;



c) $x < 5$;



d) $x \geq 1$;



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4. a) YES **b)** YES
5. a) *Inequality:* $30n + 200 \leq 2000$, where n is the number of people; *Solution:* $n \leq 60$
b) *Inequality:* $20n + 400 \leq 2000$, where n is the number of people; *Solution:* $x \leq 80$
c) Hall B is the best deal because you can invite 20 more people for the same price.

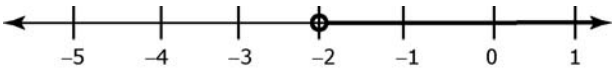
6. $75n + 90 > 60n + 120$; $g > 2$
Job B pays more than Job A if you build more than two grain bins each day.

BLM 9–6 Chapter 9 Test

1. B **2.** A **3.** C **4.** B **5.** ≥ **6.** < **7.** ≥

8. $x \leq 200$ **9. a)** $x < 2\frac{1}{2}$ **b)** $x \leq -1\frac{1}{2}$

10. $x > -2$



11. a) $17n + 25 \leq 1000$ **b)** $n \leq 57.35$
c) MOTHER. $17(58) + 25 = 1011$. They would be $11 over the budget with 58 people.
d) $1000 - 25 - (17 \times 57) = 1000 - 25 - 969 = 6$
The money left over will be $6.

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