Name_____ Date_____

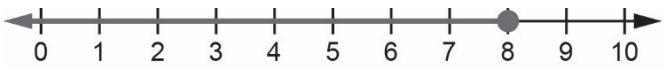
Patterns and Relations
Unit 4 Line Master 4c

Are You the Solution? Answers

1. $x - 6 \leq 2$

$x - 6 + 6 \leq 2 + 6$

$x \leq 8$



Choose a value less than 8: $x = 4$

L.S. = $x - 6$ R.S.= 2

= $4 - 6$

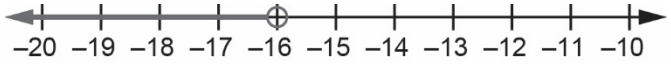
= -2

$-2 \leq 2$, so the solution is correct.

2. $-2x > 32$

$\frac{-2x}{-2} < \frac{32}{-2}$

$x < -16$



Choose a value less than –16: $x = -20$

L.S. = $-2x$ R.S.= 32

= $-2(-20)$

= 40

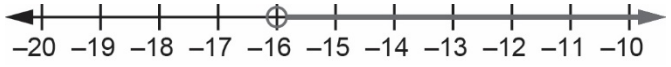
$40 > 32$, so the solution is correct.

3. $-\frac{p}{8} < 2$

$8 \times \left(-\frac{p}{8}\right) < 2 \times 8$

$-p < 16$

$p > -16$



Choose a value greater than –16: $p = 0$

L.S. = $-\frac{p}{8}$ R.S.= 2

= $-\frac{0}{8}$

= 0

$0 < 2$, so the solution is correct.

4. $q - 3.2 \geq 2.5$

$q - 3.2 + 3.2 \geq 2.5 + 3.2$

$q \geq 5.7$

Choose a value greater than 5.7: $q = 6$

L.S. = $q - 3.2$ R.S.= 2.5

= $6 - 3.2$

= 2.8

$2.8 \geq 2.5$, so the solution is correct.

Name_____ Date_____

Patterns and Relations
Unit 4 Line Master 4d

Are You the Solution? Answers (cont'd)

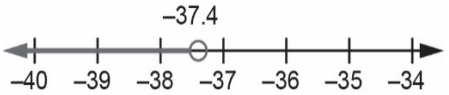
5. $2y + 13.3 < y - 24.1$

$2y + 13.3 - 13.3 < y - 24.1 - 13.3$

$2y < y - 37.4$

$2y - y < y - y - 37.4$

$y < -37.4$



Choose a value less than –37.4: $y = -40$

L.S. = $2y + 13.3$ R.S.= $y - 24.1$

= $2(-40) + 13.3$ = $-40 - 24.1$

= -66.7 = –64.1

–66.7 < –64.1, so the solution is correct.

6. $9.5 - 2.5a > 16$

$9.5 - 2.5a + 2.5a > 16 + 2.5a$

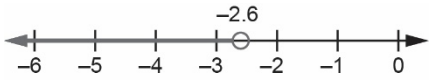
$9.5 > 16 + 2.5a$

$9.5 - 16 > 16 - 16 + 2.5a$

$-6.5 > 2.5a$

$\frac{-6.5}{2.5} > \frac{2.5a}{2.5}$

$-2.6 > a$



Choose a value less than –2.6: $a = -4$

L.S. = $9.5 - 2.5a$ R.S.= 16

= $9.5 - 2.5(-4)$

= 19.5

19.5 > 16, so the solution is correct.

7. Let p represent the length of pipe used, in metres.

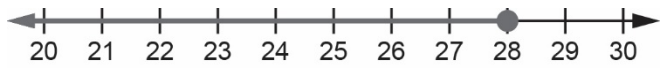
$35 - p \geq 7$

$35 - p + p \geq 7 + p$

$35 \geq 7 + p$

$35 - 7 \geq 7 - 7 + p$

$28 \geq p$



They could have used a length of 28 m or less (but greater than 0 m).

8. Let t represent the time, in minutes, spent on social media each weekday.

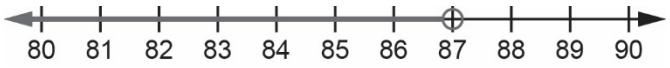
$5t + 127 < 562$

$5t + 127 - 127 < 562 - 127$

$5t < 435$

$\frac{5t}{5} < \frac{435}{5}$

$t < 87$



They could spend any time less than 87 min on social media each weekday.