




11. The student graphed  $x \geq 2$  and  $x < 4$ . The student should have graphed an open circle on 4 with the arrow pointing right.
13. a. The graph of  $x > a$  and  $x > b$  has an open circle on  $a$  with the arrow pointing right, *while* the graph of  $x > a$  or  $x > b$  has an open circle on  $b$  with the arrow pointing right.
- b. The graph of  $x > a$  and  $x > b$  has an open circle on  $b$  with the arrow pointing right, while the graph of  $x > a$  or  $x > b$  has an open circle on  $a$  with the arrow pointing right.
- c. The graphs are not different; they are the same.
15.  $x < -2$  or  $x > 1$
17.  $x \geq -0.5$  and  $x < 0.25$ , or  $-0.5 \leq x < 0.25$
19.  $x > -4$  and  $x < 2$ ;
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21.  $x > 8$ ;
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23.  $1 \leq x < 3$ ;
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25.  $7 \geq x \geq 5$ , or  $5 \leq x \leq 7$
27.  $x \geq 10$  and  $x \leq 20$ , or  $10 \leq x \leq 20$
29.  $x > 10$  and  $x < 20$ , or  $10 < x < 20$
31. Expressions may vary. Sample:  $x < 20 + 20$  (30.5) or  $x > 20 + 20$  (33.5);  $x < 630$  or  $x > 690$ ; Cartons less than 630 ounces and greater than 690 ounces should be opened for inspection.
33. A, C

- 35. Part A**  $500 \leq 12x < 1000$  ;  $41.\bar{6} \leq x < 83.\bar{3}$ ; A monthly donation from \$41.67 to \$83.33 will put Keenan in the Gold category.
- Part B**  $100 \leq 50 + 3x < 500$  ;  $16.\bar{6} \leq x < 150$ ; Three donations from \$16.67 to \$150 will put Libby in the Silver category.
- Part C**  $100 \leq 12(50 - x) < 500$  ;  $8.\bar{3} < x \leq 41.\bar{6}$ ; Paula can reduce her monthly contribution by \$8.34 to \$41.66 dollars per month.