Identifying Solutions

One-step: S1

Choose the correct solution that best describes each inequality.

1) x + 8 ≥ 17 or x − 3 ≤ 5

a) (−∞, 8] ∪ [9, ∞)   b) (−∞, 9) ∩ (8, ∞)

c) (−∞, 8]   d) (9, ∞)

2) 8x < 16 and x − 6 ≤ 3

a) (−∞, 9] ∩ (−2,∞)   b) (−∞, 2)

c) (−∞, 9]   d) (−∞, 2) ∩ [9,∞)

3) 6x < 42 or 10x > 80

a) (−∞, 8) ∩ (7, ∞)

c) (8, ∞)

4) ...35

b) (−∞, −11] ∪ (10, ∞)

) d) [−11, ∞)

5) $\dfrac{x}{4} > 8$ and $\dfrac{x}{8} < 6$

a) (−∞, 32) ∪ (−∞, 48)

c) (−∞, 48) ∩ (32, ∞)

6) ...+ 9 > 18

b) (9, ∞) ∩ [3, ∞)

d) (−∞, 3] ∪ (9, ∞)

7) 20 ≤ 5x ≤ 30

a) (−∞, 4] ∪ [6,∞)

c) [4, ∞)   d) (−∞, 6]

8) ...< −25

b) (−∞, 6]

c) (5, ∞)   d) (−∞, −5) ∪ [6, ∞)

9) 12x ≥ 36 or $\dfrac{x}{7} > 3$

a) [3, ∞)   b) (−∞, 21) ∩ [3, ∞)

c) (21, ∞)   d) (−∞,3] ∪ (21, ∞)

10) 20 + x ≥ 11 and 6x ≤ 48

a) (−∞, 8] ∩ [−9, ∞)   b) [−9, ∞)

c) (−∞, 8]   d) (−∞, 8] ∪ [−9, ∞)