PRACTICE PROBLEMS 1

Solve the following inequalities.

1. $-15 + z < -5$
2. $x + 8 < 27$
3. $-19 > y - 30$
4. $b - 16 > 24$

5. $t + 7 \geq 35$
6. $-18 \leq d - 28$
7. $19 - x \geq 12$
8. $m - 32 < 2$

9. The sum of a number, n, and 5 is at most 30.

10. When x is added to 11, the result is greater than 29.

11. If 13 is subtracted from d, the result is less than 25.

12. 23 less than a number z is at least 40.

SOLUTIONS

1. -15 + z < -5
   +15   +15
   ----
      z < 10

2. x + 8 < 27
     - 8   -8
     ----
      x < 19

3. -19 > y – 30
    + 30   +30
     ----
     11 > y

4. b – 16 > 24
     + 16 +16
     ----
      b > 40

5. t + 7 ≥ 35
      - 7   - 7
      ----
      t ≥ 28

6. – 18 ≤ d – 28
   + 28 ≤   +28
   ----
    10 ≤ d

7. 19 – x ≥ 12
    - 19 ≥ -19

    - x ≥ - 7 Multiply by – 1 and reverse the sign of
     x ≤ 7 inequality.

8. m – 32 < 2
    + 32 < 32
    ----
     m < 32

9. The sum of a number, n, and 5 is at most 30.
   n + 5 ≤ 30
   n ≤ 25

10. When x is added to 11, the result is greater than 29.
    x + 11 > 29
    x > 18

11. If 13 is subtracted from d, the result is less than 25.
    d – 13 < 25
     d < 38

12. 23 less than a number z is at least 40.
    z – 23 ≥ 40
    z ≥ 63