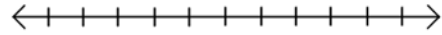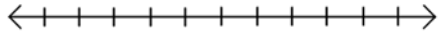Solve the following inequalities and graph the solutions on the number lines.
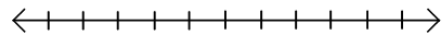
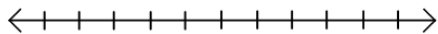1) $-\frac{2}{3}x > 2$

2) $\frac{4}{5}x < 2$

3) $-\frac{3}{2}x \leq -3$
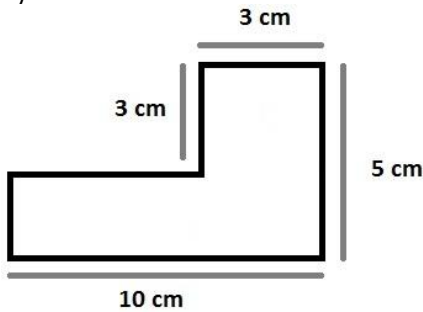
4) $12 \geq \frac{1}{2}x$

Calculate the area of the following figures:

5)

3 cm

3 cm

5 cm

10 cm

6)

12 ft

19ft

7) Simplify the following expression: $-\frac{2}{3}(9x - 18) - 5x$

8) Are the following expressions equivalent? Show how you know.

$-8x - 4 + 8x - 8$ and $4(-2x - 3) + 8x$

9) Alex wants to take a survey to see if people in Utah Valley like Sodalicious or Swig better. He goes to every Sodalicious location and asks every 4th customer that walks in the door. Is his sample representative of the population? Explain how you know.

10) Luke wants to take a survey to see if the teachers at his school prefer having first lunch or second lunch. He takes a list of all the teachers at the school and asks every third teacher on the list which lunch they prefer. Is his sample representative of the population? Explain how you know.