$\qquad$
$\qquad$
$\qquad$
Solve the following inequalities and graph the solutions on the number lines.

1) $\frac{2}{3} x-\frac{1}{2}<\frac{1}{3}$
2) $-\frac{3}{4} x-\frac{1}{3}=-\frac{1}{4}$

3) $\frac{-3 x-7}{8} \geq 1$
4) $-2 \geq \frac{2 x+4}{2}$


Find the indicated measures or values for the angles below. Show your work.
5)

6)


$$
m \angle A B C=
$$

$$
\begin{aligned}
m \angle A B C & = \\
m \angle A B D & = \\
x & =
\end{aligned}
$$

$\qquad$
7) Are the following expressions equivalent? Justify your reasoning.

$$
-\frac{1}{2}(2 x-8) \quad \text { and } \quad x+4
$$

8) Simplify:

$$
13 x y-18 y z+9 x y-8 y z
$$

9) Sam wants to go to Lagoon, but he needs to take a minimum of $\$ 130$ in order to gain entrance and buy food. He already has $\$ 40$ saved and he is doing chores around the house to make the rest. If he gets paid $\$ 5$ per chore, how many chores will he have to complete? Write and solve an inequality to answer the question.
10) A circle has an area of $200.96 \mathrm{ft}^{2}$. Using 3.14 for $\pi$, find the circumference of the circle. Show your work.
