

1. For each of the following real numbers, indicate whether it is an irrational, rational, integer, and/or natural number.

[Recall it may be more than one].

(a). $\frac{2}{3}$

(c). -10

(e). 0.5

(b). $\sqrt{9}$

(d). $-\frac{\pi}{3}$

(f). $-\sqrt{5}$

2. Do not use a calculator to perform the following operations.

(a). $5 - (-9)$

(e). $3.7 + (-5.7)$

(b). $-2 - (-4)$

(f). $10.3 + 2$

(c). $4(-2)$

(g). $-5 + 8 - 6$

(d). $24 \div 3$

(h). $5 - 8 + 6$

3. Answer the following questions. You may use a calculator.

(a). Rob started one week with \$1020 in his checking account. During the week he wrote a check for \$86, deposited \$117, wrote another check for \$186, and then canceled a previously written check of \$130. What was his final balance at the end of the week?

(b). During one week the Dow Jones average went up 12.55, up 33.61, down 51.68, down 33.91, and up 81.28. What was the net (overall) change for the Dow Jones average for this week?

4. Insert the proper sign $<$, $=$, or $>$ to replace \square in the following expressions.

(a). $-4 \square -2$

(b). $|-2| - |5| \square |3 - 3|$

5. Label each of the following intervals as open, half-open, or closed.

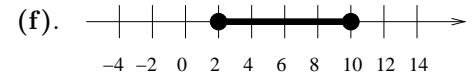
(a). $x \geq 0$

(c). $[10, 100]$

(e). $(-\infty, 7]$

(b). $-2 < x < 4$

(d). $(-8, 13)$



6. Sketch a graph of each of the following interval or inequality.

(a). $(-\infty, 4)$

(c). $1 < x < 8$

(e). $x < 0$ or $x > 4$

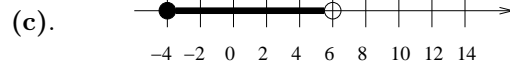
(b). $[-4, 3)$

(d). $x > 2$

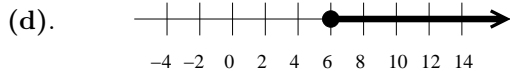
(f). $[-20, 20) \cap [0, \infty)$

7. Express each inequality or graph using interval notation.

(a). $-3 < x \leq 1$



(b). $4 < x < 10$



8. Write an inequality that describes each interval or graph.

(a). $[6, \infty)$

(c). $(0, 5)$

