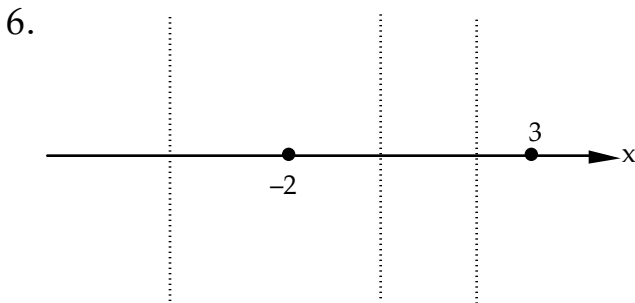
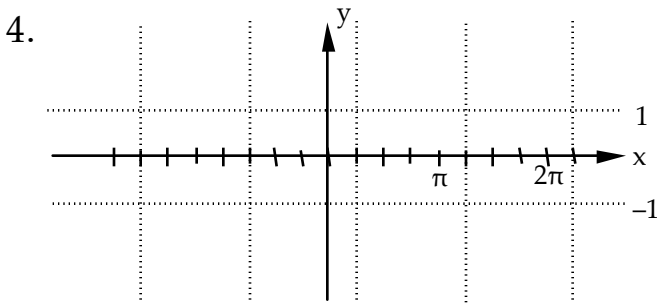
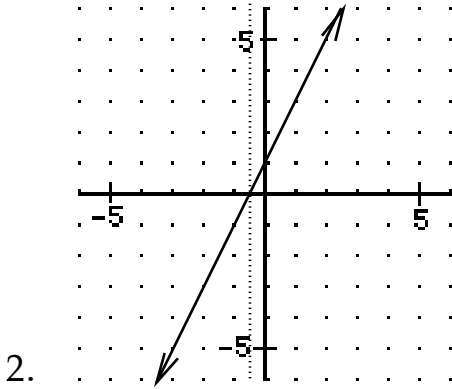


Problem Set 30



8. $3e^2 \approx 22.167$

10. $\frac{dy}{dx} = \frac{2}{3\sqrt[3]{t}} + \frac{3}{t^2}$

12. 7.4 same

14a. $f \circ g = \ln \sqrt{x+1}$

$g \circ f = \sqrt{\ln x + 1}$

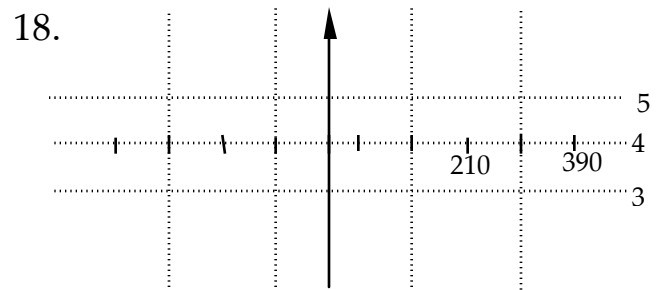
b. D: $\{x \in \mathbb{R} \mid x > -1\}$

R: $\{y \in \mathbb{R}\}$

D: $\{x \in \mathbb{R} \mid x \geq \frac{1}{e}\}$

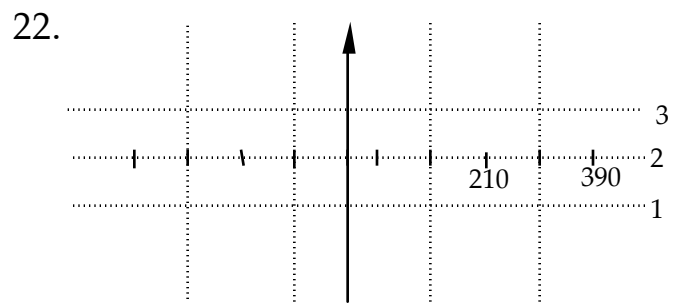
R: $\{y \in \mathbb{R} \mid y \geq 0\}$

16. $(-\infty, -3) \cup (-1, 0) \cup (1, \infty)$



20. $P_1: \left(-\frac{\sqrt{3}}{2}, \frac{1}{2}\right)$

$P_2: \left(-\frac{\sqrt{3}}{2}, -\frac{1}{2}\right)$



24. $x = \frac{5}{2} \pm \frac{\sqrt{13}}{2}$