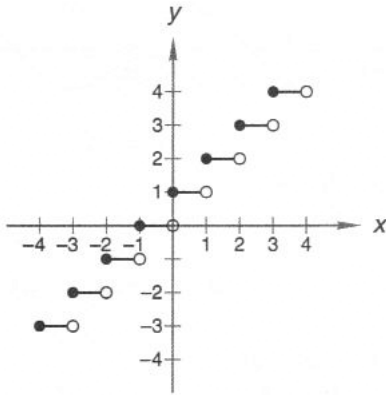


Calculus — Problem Set 11

2. 50

4.



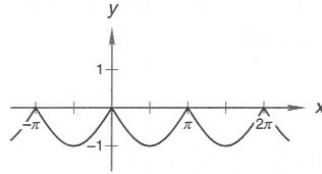
a) 2

b) 1

6. $\pm 1, \pm \frac{1}{2}, \pm \frac{1}{3}, \pm \frac{1}{6}, \pm 3, \pm \frac{3}{2}$

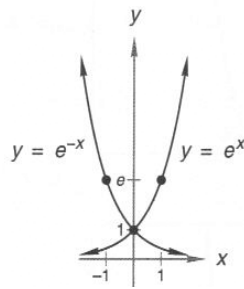
8. 7

10.



12. Range:

$$\{y \in \mathbb{R} \mid 0 \leq y < 4\}$$

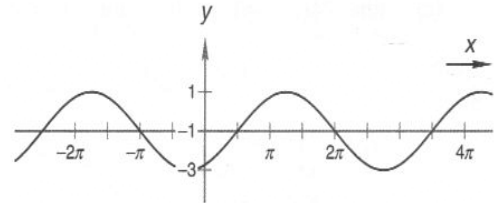


14.

16. $\sin x \cos^2 x$

18. $L = \frac{6x}{H-6}$

20.



22. Domain: $\{x \in \mathbb{R} \mid |x| \geq 1\}$

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

24. $6\sqrt{6} \approx 14.6969 \text{ units}^2$

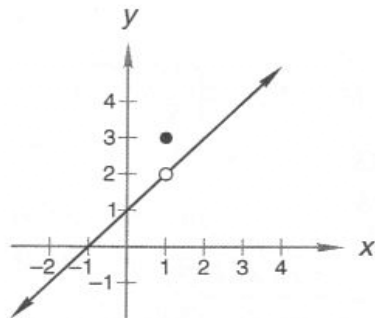
Calculus — Problem Set 12

2. $h = \sqrt{100 - x^2}$ feet

4. $-\frac{23}{25}$

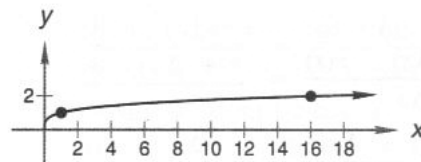
6. $2 + \sqrt{3}$

8.

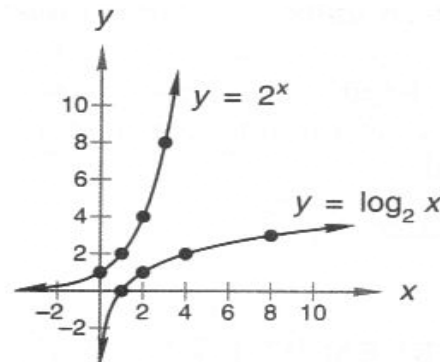


10. $-1, \frac{1}{2}, 4$

12.



14.



16. $-\cos^2 x$ or $\sin^2 x - 1$

18. $y = 5 - \frac{1}{2}x$

20. $4x + 2h$

22. $\{x \in \mathbb{R} \mid x \leq 1\}$

24. $x = 150^\circ$
 $y = 140^\circ$
 $z = 70^\circ$