

Problem Set 70 — Even Answers

2. 25 N/m^2

4. $6.434 \text{ in} \times 12.434 \text{ in}$

6. 240 gal of 20%
760 gal of 40%

8.
$$\frac{22(3600)(12)(2.54) \text{ km}}{100,000 \text{ hr}} \approx 24.140 \text{ km/hr}$$

10. $\sqrt{130}, \sqrt{130}, \sqrt{52}$
 $A = 39 \text{ units}^2$

12. major = $2\sqrt{67} \approx 16.371$
minor = $4\sqrt{7} \approx 10.583$

14. $-7 - 4i$

16. $-22 - 14i$

18. $(3.064, 2.571)$

20. $h(k(x)) = \frac{x}{1-3x}$
 $k(h(x)) = \frac{2x-12}{x^2-3x}$
not inverses

22. $b = \frac{apy - dy - amx}{mx - py}$

24. $x = -\frac{3}{2}, 0$

26. yes, $x \in \{4, -3, 8, 3, 11\}$

28. $y = \frac{7}{6}x + \frac{25}{2}$
 $x = -\frac{75}{7}, y = \frac{25}{2}$

30. $w = 50, x = 40$
 $y = 40, z = 50$
 $R = 100$