

pg. 752 # 3-39 x3 42-48 even

3. $\cot -55^\circ$ use $\tan -55^\circ = -1.43$
 $\cot = \frac{1}{-1.43} = -0.70$

6. $\sin \theta = \frac{13}{18}$ $\csc \theta = \frac{1}{\sin \theta} = \frac{18}{13}$

9. $\sec 45^\circ$ use $\cos 45^\circ = \frac{\sqrt{2}}{2}$

$$\sec = \frac{1}{\frac{\sqrt{2}}{2}} = \frac{2 \cdot \sqrt{2}}{\sqrt{2} \sqrt{2}} = \frac{2\sqrt{2}}{2} = \sqrt{2}$$

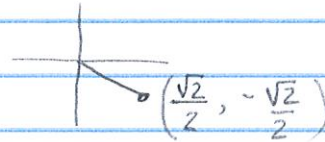
21. $\cot 3$ use $\tan 3 = -1.43$

$$\cot = \frac{1}{-1.43} = -0.70$$

30. graph paper

33. $\sec 30^\circ$ use GC. $y = \frac{1}{\cos x}$ find 30° in table
1.1547

42. $\cot -45^\circ$ use $\tan -45^\circ$



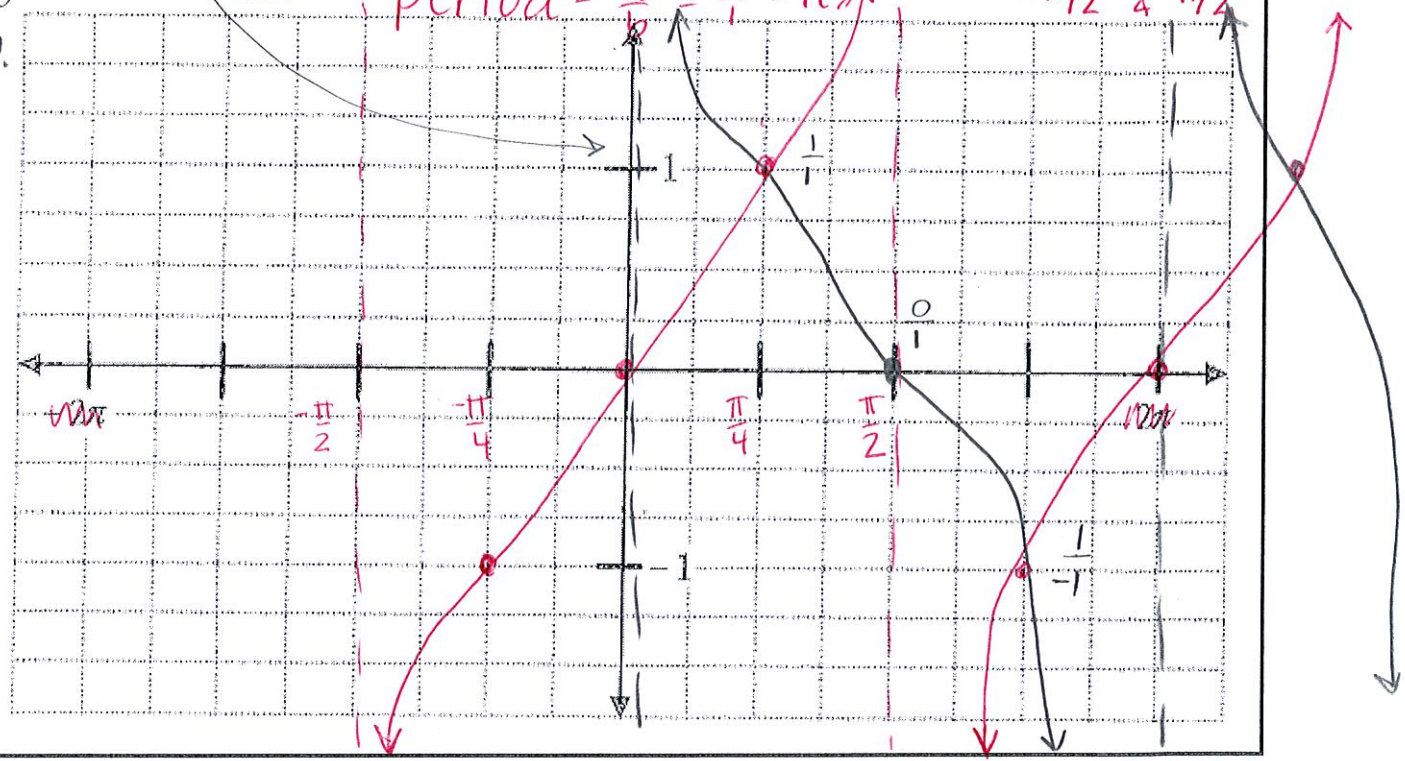
$$\tan(45^\circ) = -1$$
$$\cot = \frac{1}{-1} = -1$$

46. graph paper

30. $y = \cot \theta$
 $\frac{1}{0}$ is undefined

$y = \tan \theta$ as a reference
 amp = 1
 period = $\frac{\pi}{1} = \frac{\pi}{1} = \pi$

symmetry = $\frac{\pi}{2}$
 $-\pi/2$ & $\pi/2$



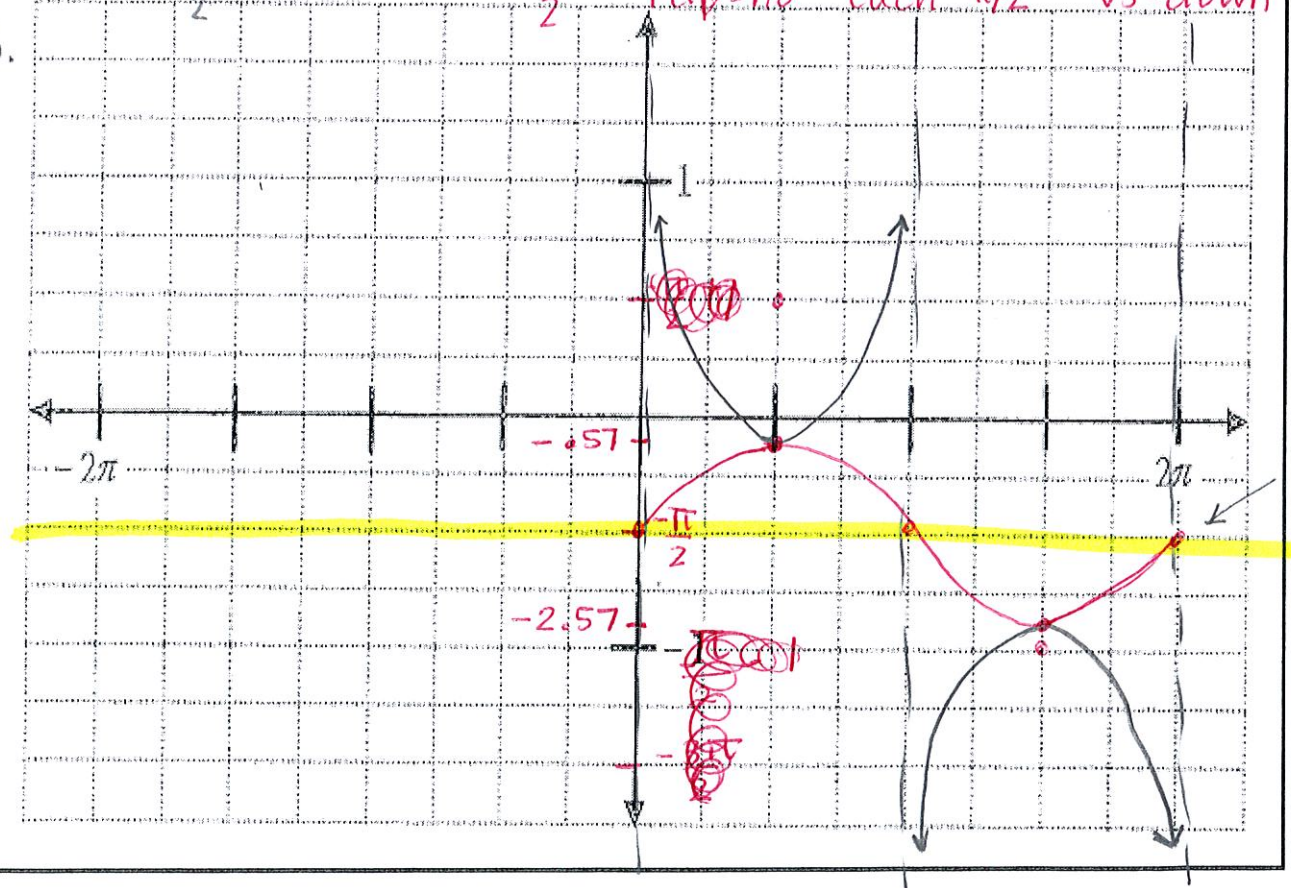
46. $\csc \theta - \frac{\pi}{2}$

use $\sin \theta - \frac{\pi}{2}$

amp = 1
 flip = no

period = 2π
 each $\pi/2$

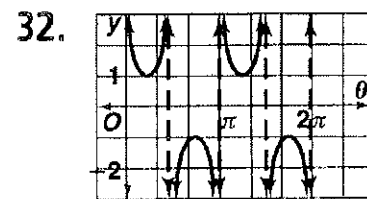
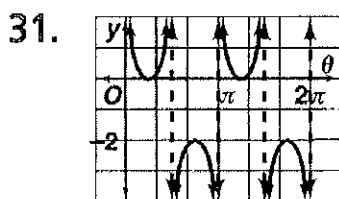
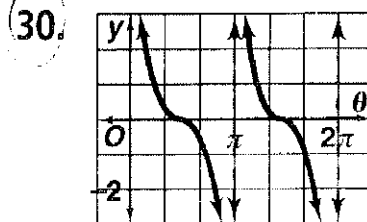
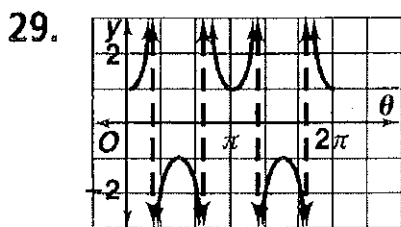
ps = none
 vs = down $\pi/2$



this is the "zero"

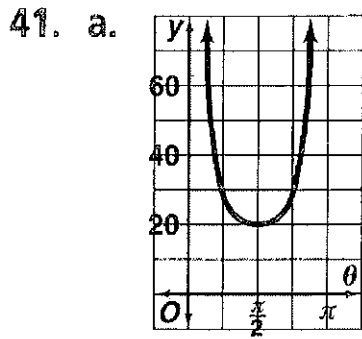
Answers for Lesson 13-8, pp. 752–755 Exercises

- | | | |
|--------------------------|---------------------------|--------------------|
| 1. 1.02 | 2. 1.02 | 3. -0.70 |
| 4. -1.06 | 5. $\frac{3}{4}$ | 6. $\frac{18}{13}$ |
| 7. $-\frac{5}{3}$ | 8. $-\frac{3}{4}$ | 9. $\sqrt{2}$ |
| 10. $\frac{\sqrt{3}}{3}$ | 11. 0 | 12. -1 |
| 13. undefined | 14. $\frac{2\sqrt{3}}{3}$ | 15. undefined |
| 16. $\sqrt{3}$ | 17. undefined | 18. 2 |
| 19. 2 | 20. $\sqrt{2}$ | 21. -7.02 |
| 22. -1 | 23. 1 | 24. -1 |
| 25. -1.25 | 26. 17.13 | 27. 1.73 |
| 28. 1.02 | | |



- | | | |
|------------|------------|-------------|
| 33. 1.1547 | 34. 5.7588 | 35. -2.9238 |
| 36. 2 | 37. 1.0642 | 38. 1.3054 |
| 39. 1.7321 | 40. 0.5774 | |

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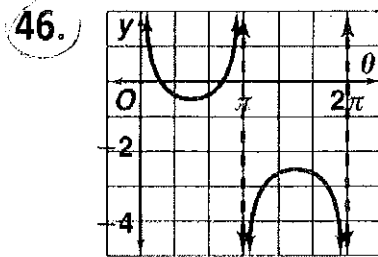
b. ≈ 28.3 ft

c. ≈ 23.1 ft

d. ≈ 20.7 ft

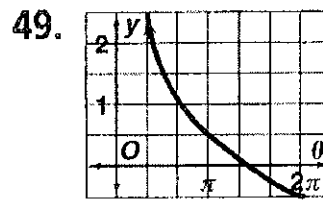
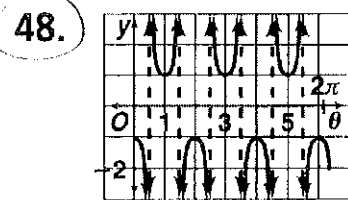
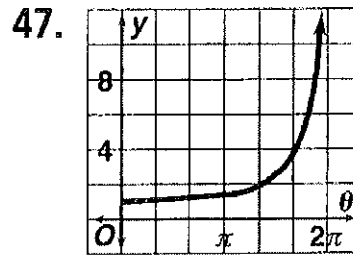
42. -1

44. -1



43. $\frac{2\sqrt{3}}{3}; 1.15$

45. -1



50. B

51. C

52. A

53. D

54. a. domain: all real numbers except multiples of π ; range: all real numbers ≥ 1 or ≤ -1 ; period 2π

b. 1

c. -1

55. a. Reciprocals have the same sign.

b. The reciprocal of -1 is -1 .

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