

# Pre-Calculus B: Final Review Answers

## Part 1

1.  $\frac{1}{10} \log_{19} 7 - 2 \log_{19} y - \log_{19} x$

2.  $\log_4 \frac{125}{\sqrt[7]{x-1} \sqrt[3]{x}}$

3. 2.430

4. 82

5. 4

6. 3

7. 0.14

8. \$25649.12

9. 31.65 yr

10. 16.902 yr

11. 13.9 yr

12. 0.248 g

13. 35 bacterium

14. 91989 people

15.  $331.89^\circ$

16.  $178^\circ 31' 48''$

17. 4.189 cm

18.  $31.416 \text{ m}^2$

19.  $160^\circ$

20.  $\frac{29\pi}{60}$

21.  $\frac{-\sqrt{33}}{7}$

22. 3.73

23.  $\frac{-\sqrt{5}}{2}$

24.  $\sqrt{3}$

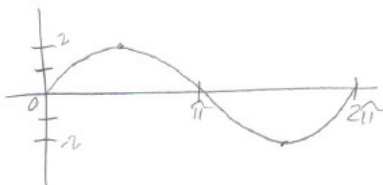
25.  $-\sqrt{2}$

26. III

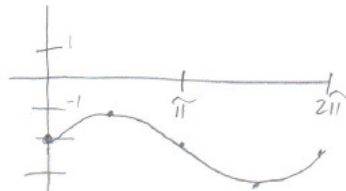
27.  $\sqrt{15}$

28.  $\frac{-\sqrt{77}}{2}$

29.



30.



## Part 2

1. 1.98

3. -1

5. 2

7.  $\frac{\pi}{6}$

9. 1.13

11.  $\frac{5\pi}{4}, \frac{7\pi}{4}$

13.  $\frac{7\pi}{6}, \frac{11\pi}{6}$

15.  $0, \frac{2\pi}{3}, \frac{4\pi}{3}$

17.  $\frac{4\sqrt{41}}{41}$

19.  $m\angle B = 50^\circ$   
 $a \approx 3.36$   
 $c \approx 5.22$

21. 11.1 ft

23. Case I  
 $m\angle A \approx 18.876^\circ$   
 $m\angle C \approx 146.124^\circ$   
 $c \approx 8.615$

2.  $\frac{\sqrt{3}}{2}$

4.  $\frac{\sqrt{2}}{2}$

6.  $\frac{\sqrt{17}}{-8}$

8.  $\pi$

10.  $\frac{\pi}{6}, \frac{5\pi}{6}, \frac{7\pi}{6}, \frac{11\pi}{6}$

12. 6.005, 2.863

14.  $\frac{\pi}{2}$

16.  $\frac{\pi}{2}, \frac{3\pi}{2}$

18.  $\frac{\sqrt{74}}{5}$

20. 16534 ft

22.  $m\angle A = 120^\circ$   
 $b \approx 1.003$   
 $c \approx 4.423$

Case II  
 $m\angle A \approx 161.124^\circ$   
 $m\angle C \approx 3.876^\circ$   
 $c \approx 1.045$

24. 1.922 mi

25.  $m\angle A \approx 43.469^\circ$   
 $m\angle B \approx 66.531^\circ$   
 $c \approx 8.195$

26.  $m\angle A \approx 21.787^\circ$   
 $m\angle B = 60^\circ$   
 $m\angle A \approx 98.213^\circ$

27. 26.799

28. 27.928

29.  $229 \text{ cm}^2$

30. \$423