MATH 2412 FINAL EXAM REVIEW PROFESSOR PRESCOTT

Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

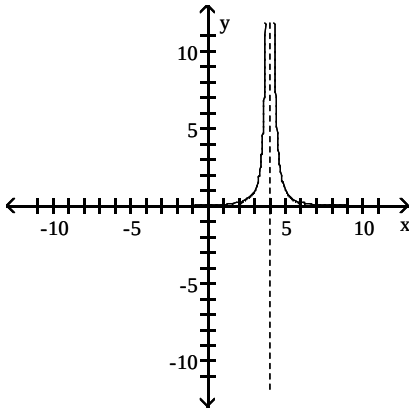
Solve the problem.

1) A projectile is thrown upward so that its distance above the ground after t seconds is $h = -12t^2 + 336t$. After how many seconds does it reach its maximum height? 1) _____

A) 21 sec B) 28 sec C) 7 sec D) 14 sec

Use the graph to determine the domain and range of the function.

2) 2) _____



A) domain: $\{x \mid x > 0\}$
range: $\{y \mid y \neq 4\}$

B) domain: $\{x \mid x \neq 4\}$
range: $\{y \mid y \geq 0\}$

C) domain: $\{x \mid x \geq 0\}$
range: $\{y \mid y \neq 4\}$

D) domain: $\{x \mid x \neq 4\}$
range: $\{y \mid y > 0\}$

Find the vertical asymptotes of the rational function.

3) $H(x) = \dfrac{x - 4}{16x - x^3}$ 3) _____

A) $x = 0, x = -4$

B) $x = 0, \ x = 4$

C) $x = -4, x = 4$

D) $x = 0, x = -4, x = 4$

Solve the inequality. Express the solution using interval notation.

4) $\dfrac{x + 11}{x + 8} < 9$ 4) _____

A) $(-\infty, -8)$ or $\left(-\dfrac{61}{8}, \infty\right)$

B) $(-\infty, -8)$ or $(8, \infty)$

C) $\left(-\infty, -\dfrac{61}{8}\right)$ or $(8, \infty)$

D) $\left(-8, -\dfrac{61}{8}\right)$

Give the maximum number of zeros the polynomial function may have. Use Descarte's Rule of Signs to determine how many positive and how many negative zeros it may have.

5) $f(x) = 5x^4 - 3x^3 + x^2 - 2.5x + 6$ 5) _____

A) 4; 4 positive zeros, no negative zeros

B) 4; 4 or 2 positive zeros, no negative zeros

C) 4; 4, 2 or 0 positive zeros, no negative zeros

D) 4; 4, 2 or 0 positive zeros, 1 negative zeros

Find all the real zeros of the polynomial function.

6) $f(x) = x^3 + 2x^2 - 5x - 6$ 6) _____

A) –2, 1, 3; $f(x) = (x + 2)(x - 1)(x - 3)$

B) –3, –1, 2; $f(x) = (x + 3)(x + 1)(x - 2)$

C) –3; $f(x) = (x + 3)(x^2 - x - 2)$

D) –1; $f(x) = (x + 1)(x^2 + x - 6)$

Solve the equation in the complex number system.

7) $x^4 - 5x^3 + 2x^2 + 22x - 20 = 0$ 7) _____

A) {–1, –2} B) {–1, 2} C) {1, 2} D) {–2, 1}

Form a polynomial f(x) with real coefficients having the given degree and zeros.

8) Degree: 4; zeros: 3i and –4i 8) _____

A) $f(x) = x^4 + 25x^2 - 4x + 144$

B) $f(x) = x^4 - 3x^3 + 25x^2 + 144$

C) $f(x) = x^4 - 4x^2 + 144$

D) $f(x) = x^4 + 25x^2 + 144$

For the given functions f and g, find the requested composite function.

9) $f(x) = \frac{x - 9}{8}$, $g(x) = 8x + 9$; Find $(g \circ f)(x)$. 9) _____

A) $x + 18$ B) $x - \frac{9}{8}$ C) x D) $8x + 63$

The function f is one–to–one. Find its inverse.

10) $f(x) = (x + 2)^3 - 8$. 10) _____

A) $f^{-1}(x) = \sqrt[3]{x + 10}$

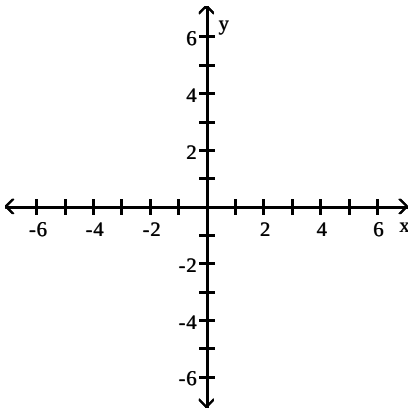
B) $f^{-1}(x) = \sqrt[3]{x + 6}$

C) $f^{-1}(x) = \sqrt[3]{x - 2} + 8$

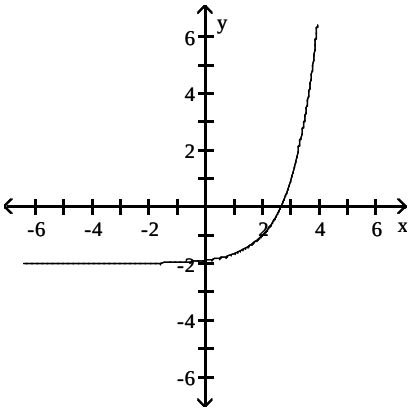
D) $f^{-1}(x) = \sqrt[3]{x + 8} - 2$

Graph the function.

11) $f(x) = 3^{(x + 2)} + 2$ 11) _____



A)



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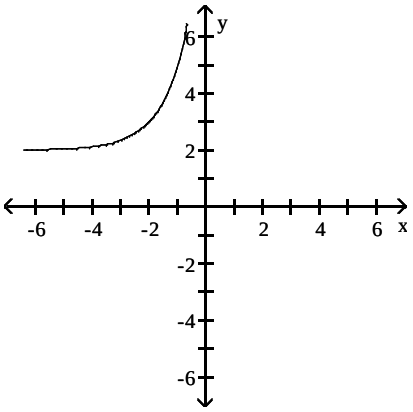
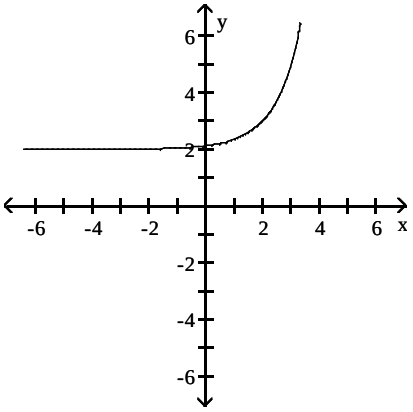
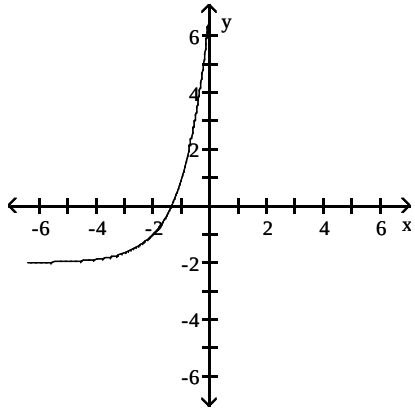


C)



D)



Change the exponential expression to an equivalent expression involving a logarithm.

12) $7^x = 343$ 12) _____

A) $\log_{343} 7 = x$ B) $\log_7 343 = x$ C) $\log_{343} x = 7$ D) $\log_x 343 = 7$

Find the exact value of the logarithmic expression.

13) $\log_5 25$ 13) _____

A) 2 B) 10 C) 25 D) 5

Write as the sum and/or difference of logarithms. Express powers as factors.

14) $\log_4 \frac{17\sqrt{x}}{y}$ 14) _____

A) $\log_4 17 \cdot \frac{1}{2} \log_4 m \div \log_4 y$

B) $\log_4 y - \log_4 17 - \frac{1}{2} \log_4 x$

C) $\log_4 (17\sqrt{x}) - \log_4 y$

D) $\log_4 17 + \frac{1}{2} \log_4 x - \log_4 y$

Solve the equation.

15) $2 + \log_3(2x + 5) - \log_3 x = 4$ 15) _____

A) $\left\{\frac{5}{4}\right\}$ B) $\left\{\frac{1 \pm \sqrt{46}}{9}\right\}$ C) $\left\{\frac{5}{7}\right\}$ D) $\left\{\frac{1 + \sqrt{46}}{9}\right\}$

16) $3 \cdot 5^{2t - 1} = 75$ 16) _____

A) {3} B) $\left\{\frac{1}{2}\right\}$ C) $\left\{\frac{3}{2}\right\}$ D) $\left\{\frac{13}{10}\right\}$

Solve the problem.

17) How long does it take $1700 to double if it is invested at 5% interest, compounded monthly? Round your answer to the nearest tenth. 17) _____

A) 3.9 yr B) 4.8 yr C) 13.9 yr D) 7.9 yr

18) The logistic growth model $P(t) = \frac{180}{1 + 17e^{-0.179t}}$ represents the population of a species introduced into a new territory after t years. What will the population be in 30 years? 18) _____

A) 2275 B) 180 C) 167 D) 169

Convert the angle in degrees to radians. Express the answer as multiple of π.

19) $-75°$ 19) _____

A) $-\frac{6\pi}{13}$ B) $-\frac{4\pi}{11}$ C) $-\frac{12\pi}{5}$ D) $-\frac{5\pi}{12}$

Solve the problem.

20) A circle has a radius of 12 centimeters. Find the area of the sector of the circle formed by an angle of 15°. If necessary, round the answer to two decimal places. 20) _____

A) 6 cm^2 B) 1.57 cm^2 C) 37.7 cm^2 D) 18.85 cm^2

Find the exact value. Do not use a calculator.

21) $\sec \frac{\pi}{6}$ 21) _____

A) $\frac{\sqrt{3}}{2}$ B) $\frac{2\sqrt{3}}{3}$ C) 2 D) $\sqrt{2}$

Find the exact value of the expression. Do not use a calculator.

22) $\sin \frac{\pi}{3} - \cos \frac{\pi}{6}$ 22) _____

A) 0 B) $\frac{\sqrt{3} - 1}{2}$ C) $\sqrt{3}$ D) 1

Use the fact that the trigonometric functions are periodic to find the exact value of the expression. Do not use a

23) $\tan 930°$ 23) _____

A) $\frac{\sqrt{3}}{3}$ B) $\frac{\sqrt{3}}{2}$ C) $-\sqrt{3}$ D) $\sqrt{3}$

Write the equation of a sine function that has the given characteristics.

24) Amplitude: 2
Period: 4π
Phase Shift: $\frac{\pi}{4}$ 24) _____

A) $y = 2\sin\left(\frac{1}{2}x - \frac{1}{8}\pi\right)$

B) $y = 2\sin\left(4x + \frac{\pi}{4}\right)$

C) $y = 2\sin\left(\frac{1}{2}x + \frac{1}{8}\pi\right)$

D) $y = 2\sin\left(2x + \frac{1}{8}\pi\right)$

Find the exact value of the expression.

25) $\sec[\tan^{-1}(-\sqrt{3})]$ 25) _____

A) 2 B) $\frac{1}{2}$ C) $-\frac{2\sqrt{3}}{3}$ D) $\frac{2\sqrt{3}}{3}$

26) $\sin^{-1}\left(\sin\frac{4\pi}{5}\right)$ 26) _____

A) $\frac{4\pi}{5}$ B) $\frac{5}{\pi}$ C) $\frac{5}{4\pi}$ D) $\frac{\pi}{5}$

Simplify the expression.

27) $\frac{\cos \theta}{1 + \sin \theta} + \tan \theta$ 27) _____

A) $\cos \theta + \sin \theta$ B) $\sin^2 \theta$ C) $\sec \theta$ D) 1

Solve the problem.

28) If $\cos \theta = \frac{1}{3}$, θ in quadrant IV, find the exact value of $\tan\left(\theta + \frac{\pi}{4}\right)$ 28) _____

A) $\frac{\sqrt{15} - \sqrt{3}}{8}$ B) $\frac{\sqrt{15} - 4\sqrt{3}}{16}$ C) $\frac{1 - 2\sqrt{2}}{1 + 2\sqrt{2}}$ D) $\frac{\sqrt{3} + \sqrt{15}}{8}$

Use the information given about the angle θ, $0 \le \theta \le 2\pi$, to find the exact value of the indicated trigonometric function.

29) $\sin \theta = \frac{24}{25}$, $0 < \theta < \frac{\pi}{2}$ Find $\cos(2\theta)$. 29) _____

A) $-\frac{527}{625}$ B) $\frac{527}{625}$ C) $-\frac{529}{625}$ D) $\frac{336}{625}$

Find the exact value of the expression.

30) $\sin\left(2\cos^{-1}\frac{\sqrt{3}}{2}\right)$ 30) _____

A) $\sqrt{3}$ B) $\frac{\sqrt{3}}{2}$ C) $\frac{1}{2}$ D) $-\frac{\sqrt{3}}{2}$

Complete the identity.

31) $\sin(4\theta)\sin(7\theta)\cos(4\theta)\cos(7\theta) = ?$ 31) _____

A) $\frac{\cos^2(11\theta) + \cos^2(3\theta)}{4}$ B) $\frac{\sin^2(56\theta)}{4}$

C) $\cos^2(56\theta)$ D) $\frac{\cos^2(3\theta) - \cos^2(11\theta)}{4}$

Express the sum or difference as a product of sines and/or cosines.

32) $\cos(5\theta) + \cos(3\theta)$ 32) _____

A) $2\cos(4\theta)$ B) $2\cos(4\theta)\cos\theta$ C) $2\cos(4\theta)\sin\theta$ D) $2\sin(4\theta)\sin\theta$

Solve the equation on the interval $0 \le \theta < 2\pi$.

33) $4 \sin^2 \theta = 1$ 33) _____

A) $\frac{\pi}{6}, \frac{5\pi}{6}, \frac{7\pi}{6}, \frac{11\pi}{6}$

B) $\frac{\pi}{3}, \frac{2\pi}{3}$

C) $\frac{\pi}{6}, \frac{5\pi}{6}$

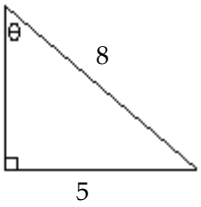
D) $\frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$

34) $\cos^2 \theta = 3(1 - \sin \theta)$ 34) _____

A) 0 B) $\frac{3\pi}{2}$ C) $\frac{\pi}{2}$ D) π

Find the value of the indicated trigonometric function of the angle θ in the figure. Give an exact answer with a rational denominator.

35) 35) _____



Find sec θ.

A) $\frac{8\sqrt{39}}{39}$ B) $\frac{5}{8}$ C) $\frac{\sqrt{39}}{8}$ D) $\frac{8}{5}$

Solve the problem.

36) A surveyor standing 53 meters from the base of a building measures the angle to the top of the building and finds it to be 40°. The surveyor then measures the angle to the top of the radio tower on the building and finds that it is 49°. How tall is the radio tower? 36) _____

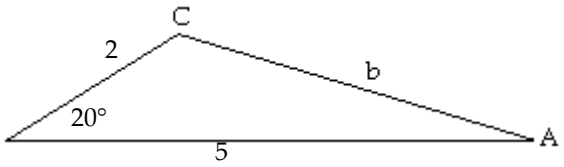
A) 16.5 m B) 5.83 m C) 5.93 m D) 8.39 m

37) It is 4.7 km from Lighthouse A to Port B. The bearing of the port from the lighthouse is N73 °E. A ship has sailed due west from the port and its bearing from the lighthouse is N31 °E. How far has the ship sailed from the port? Round your answer to the nearest 0.1 km. 37) _____

A) 3.1 km B) 3.5 km C) 2.7 km D) 3.7 km

Find the area of the triangle. If necessary, round the answer to two decimal places.

38) 38) _____



A) 1.71 B) 3.42 C) 6.84 D) 4.7

Solve the problem.

39) A painter needs to cover a triangular region 65 meters by 67 meters by 71 meters. A can of paint covers 70 square meters. How many cans will be needed? 39) _____

A) 321 cans B) 29 cans C) 15 cans D) 3 cans

An object attached to a coiled spring is pulled down a distance a from its rest position and then released. Assuming that the motion is simple harmonic with period T, write an equation that relates the displacement d of the object from its rest position after t seconds. Also assume that the positive direction of the motion is up.

40) a = 10; T = 5 seconds 40) _____

A) $d = -10 \cos\left(\frac{1}{5}\pi t\right)$ B) $d = -10 \cos\left(\frac{2}{5}\pi t\right)$

C) $d = -5 \cos\left(\frac{1}{5}\pi t\right)$ D) $d = -10 \sin\left(\frac{2}{5}\pi t\right)$

The polar coordinates of a point are given. Find the rectangular coordinates of the point.

41) $\left(5, \frac{2\pi}{3}\right)$ 41) _____

A) $\left(\frac{5}{2}, -\frac{5\sqrt{3}}{2}\right)$ B) $\left(\frac{5}{2}, \frac{5\sqrt{3}}{2}\right)$ C) $\left(-\frac{5}{2}, \frac{5\sqrt{3}}{2}\right)$ D) $\left(-\frac{5}{2}, -\frac{5\sqrt{3}}{2}\right)$

The letters x and y represent rectangular coordinates. Write the equation using polar coordinates (r, θ).

42) $x^2 + y^2 = 4x$ 42) _____

A) $r = 4 \cos \theta$

B) $r \sin^2 \theta = 4 \cos \theta$

C) $r \cos^2 \theta = 4 \sin \theta$

D) $r = 4 \sin \theta$

Solve the problem. Leave your answer in polar form.

43) $z = 2 + 2i$ 43) _____

$w = \sqrt{3} - i$

Find zw.

A) $4\left(\cos \frac{\pi}{12} + i \sin \frac{\pi}{12}\right)$

B) $4\sqrt{2}\left(\cos \frac{23\pi}{12} + i \sin \frac{23\pi}{12}\right)$

C) $4\left(\cos \frac{23\pi}{12} + i \sin \frac{23\pi}{12}\right)$

D) $4\sqrt{2}\left(\cos \frac{\pi}{12} + i \sin \frac{\pi}{12}\right)$

44) $z = 10(\cos 45° + i \sin 45°)$ 44) _____

$w = 5(\cos 15° + i \sin 15°)$

Find $\frac{z}{w}$.

A) $\frac{1}{2}(\cos 45° + i \sin 45°)$

B) $2(\cos 45° + i \sin 45°)$

C) $2(\cos 30° + i \sin 30°)$

D) $\frac{1}{2}(\cos 30° + i \sin 30°)$

Write the expression in the standard form a + bi.

45) $(1 + i)^{20}$ 45) _____

A) 1024i B) –1024 C) 1024 D) –1024i

Find the angle between v and w. Round your answer to one decimal place, if necessary.

46) $\mathbf{v} = -5\mathbf{i} + 7\mathbf{j}$, $\mathbf{w} = -6\mathbf{i} - 4\mathbf{j}$ 46) _____

A) 20.7° B) 88.2° C) 90.9° D) 110.8°

Solve the problem.

47) A power boat in still water maintains a speed of 45 miles per hour. The boat heads directly across a river perpendicular to the current which has a speed of 7 miles per hour. Find the actual speed and direction of the boat. 47) _____

A) 17 mph; 24° off course B) 21 mph; 19° off course

C) 45 mph; 9° off course D) 46 mph; 9° off course

48) An SUV weighing 5000 pounds is parked on a street which has an incline of 9°. Find the force required to keep the SUV from rolling down the hill and the force of the SUV perpendicular to the hill. Round the forces to the nearest hundredth. 48) _____

A) 782.17 lb and 4938.44 lb
B) 391.09 lb and 2469.22 lb
C) 954.04 lb and 4908.14 lb
D) 609.35 lb and 4962.73 lb

Find the vertex, focus, and directrix of the parabola with the given equation.

49) $(y - 2)^2 = 16(x + 1)$ 49) _____

A) vertex: (2, –1)
focus: (6, –1)
directrix: x = –2

B) vertex: (–1, 2)
focus: (–5, 2)
directrix: x = 3

C) vertex: (1, –2)
focus: (5, –2)
directrix: x = –3

D) vertex: (–1, 2)
focus: (3, 2)
directrix: x = –5

Find the center, foci, and vertices of the ellipse.

50) $81x^2 + y^2 - 324x + 243 = 0$ 50) _____

A) $(x - 2)^2 + \frac{y^2}{81} = 1$

center: (2, 0); foci: $(2, 4\sqrt{5})$, $(2, -4\sqrt{5})$; vertices:(2, 9), (2, –9)

B) $(x - 9)^2 + \frac{y^2}{4} = 1$

center: (9, 0); foci: $(9, \sqrt{3})$, $(9, -\sqrt{3})$; vertices:(9, 2), (9, –2)

C) $\frac{x^2}{4} + (y - 9)^2 = 1$

center: (9, 0); foci: $(9, \sqrt{3})$, $(9, -4\sqrt{5})$; vertices:(9, 2), (9, –2)

D) $\frac{x^2}{81} + (y - 2)^2 = 1$

center: (2, 0); foci: $(2, 4\sqrt{5})$, $(2, -4\sqrt{5})$; vertices:(2, 9), (2, –9)

Find an equation for the hyperbola described.

51) Focus at (–3, 7); vertices at (2, 7) and (0, 7) 51) _____

A) $(x - 7)^2 - \frac{(y - 1)^2}{15} = 1$

B) $\frac{(x - 7)^2}{15} - (y - 1)^2 = 1$

C) $(x - 1)^2 - \frac{(y - 7)^2}{15} = 1$

D) $\frac{(x - 1)^2}{15} - (y - 7)^2 = 1$

Determine the appropriate rotation formulas to use so that the new equation contains no xy –term.

52) $4x^2 + 2xy + 4y^2 - 8x + 8y = 0$ 52) _____

A) $x = -y'$ and $y = x'$

B) $x = \frac{1}{2}x' - \frac{\sqrt{3}}{2}y'$ and $y = \frac{\sqrt{3}}{2}x' + \frac{1}{2}y'$

C) $x = \frac{\sqrt{2}}{2}(x' - y')$ and $y = \frac{\sqrt{2}}{2}(x' + y')$

D) $x = \frac{\sqrt{2+\sqrt{2}}}{2}x' - \frac{\sqrt{2-\sqrt{2}}}{2}y'$ and $y = \frac{\sqrt{2-\sqrt{2}}}{2}x' + \frac{\sqrt{2+\sqrt{2}}}{2}y'$

Convert the polar equation to a rectangular equation.

53) $r = \frac{2}{2 + \cos\theta}$ 53) _____

A) $4x^2 + 3y^2 + 4y - 4 = 0$

B) $3x^2 + 4y^2 + 4x - 4 = 0$

C) $4x^2 + 4y^2 + 4x - 4 = 0$

D) $5x^2 + 4y^2 - 4x - 4 = 0$

Find a rectangular equation for the plane curve defined by the parametric equations.

54) $x = 2t$, $y = t + 3$; $-2 \le t \le 3$ 54) _____

A) $y = \frac{1}{2}x + 3$; for x in $-4 \le x \le 6$

B) $y = -2x + 3$; for x in $-\infty < x < \infty$

C) $y = x^2 + 1$; for x in $-2 \le x \le 2$

D) $y = \frac{1}{2}x - 3$; for x in $-\infty < x < \infty$

55) $x = 2t - 1$, $y = t^2 + 5$; $-4 \le t \le 4$ 55) _____

A) $y = x^2 + 1$; for x in $-2 \le x \le 2$

B) $y = \frac{1}{2}x^2 + 1$; for x in $-6 \le x \le 4$

C) $y = -\frac{1}{2}x + 30$; for x in $-6 \le x \le 4$

D) $y = \frac{1}{4}x^2 + \frac{1}{2}x + \frac{21}{4}$; for x in $-9 \le x \le 7$

56) $x = t^3 + 1$, $y = t^3 - 20$; $-2 \le t \le 2$ 56) _____

A) $y = -x - 21$; for x in $-7 \le x \le 9$

B) $y = -x^2$; for x in $-4 \le x \le 4$

C) $y = x - 21$; for x in $-7 \le x \le 9$

D) $y = x^3$; for x in $-3 \le x \le 1$

57) $x = t^3 + 1$, $y = t^3 - 1$; $-2 \le t \le 2$ 57) _____

A) $y = -x - 2$; for x in $-7 \le x \le 9$

B) $y = x - 2$; for x in $-7 \le x \le 9$

C) $y = -x^2$; for x in $-4 \le x \le 4$

D) $y = x^3$; for x in $-3 \le x \le 1$

58) $x = 3 \sin t$, $y = 3 \cos t$; $0 \le t \le 2\pi$ 58) _____

A) $y = x^2 - 9$; for x in $-2 \le x \le 2$

B) $y = \sqrt{a^2 - x^2} = 9$; for x in $-\infty < x < \infty$

C) $y^2 - x^2 = 9$; for x in $-\infty < x < \infty$

D) $x^2 + y^2 = 9$; for x in $-3 \le x \le 3$

59) $x = 3 \tan t$, $y = 4 \sec t$; $0 \le t \le 2\pi$ 59) _____

A) $\frac{y^2}{16} - \frac{x^2}{9} = 1$; for x in $-\infty < x < \infty$

B) $y = x^2 - 9$; for x in $-3 \le x \le 3$

C) $\frac{y^2}{16} + \frac{x^2}{9} = 1$; for x in $-\infty < x < \infty$

D) $y = 4\sqrt{1 + \frac{x^2}{9}}$; for x in $-\infty < x < \infty$

60) $x = 5 \cos t$, $y = -2 \sin t$; $0 \le t \le 2\pi$ 60) _____

A) $4x^2 - 25y^2 = 100$; $x \ge 5$

B) $4x^2 - 25y^2 = 1$; $x \ge \frac{1}{2}$

C) $4x^2 + 25y^2 = 1$; $-\frac{1}{5} \le x \le \frac{1}{5}$

D) $4x^2 + 25y^2 = 100$; $-5 \le x \le 5$

1) D
ID: PCALC8 3.4.1–5
Objective: (3.4) Solve Applied Problems Involving

2) D
ID: PCALC8 4.2.1–14
Objective: (4.2) Find the Domain of a Rational Function

3) A
ID: PCALC8 4.2.2–25
Objective: (4.2) Find the Vertical Asymptotes of a Rational

4) A
ID: PCALC8 4.4.2–4
Objective: (4.4) Solve Rational Inequalities

5) C
ID: PCALC8 4.5.2–5
Objective: (4.5) Use Descartes' Rule of Signs to Determine

6) B
ID: PCALC8 4.5.4–2+
Objective: (4.5) Find the Real Zeros of a Polynomial

7) B
ID: PCALC8 4.5.5–6+
Objective: (4.5) Solve Polynomial Equations

8) D
ID: PCALC8 4.6.2–5
Objective: (4.6) Find a Polynomial Function with Specified

9) C
ID: PCALC8 5.1.1–19
Objective: (5.1) Form a Composite Function

10) D
ID: PCALC8 5.2.4–22
Objective: (5.2) Find the Inverse of a Function Defined by

11) B
ID: PCALC8 5.3.2–9+
Objective: (5.3) Graph Exponential Functions

12) B
ID: PCALC8 5.4.1–5
Objective: (5.4) Change Exponential Expressions to

13) A
ID: PCALC8 5.4.2–1
Objective: (5.4) Evaluate Logarithmic Expressions

14) D
ID: PCALC8 5.5.2–2
Objective: (5.5) Write a Logarithmic Expression as a Sum

15) C
ID: PCALC8 5.6.1–13
Objective: (5.6) Solve Logarithmic Equations

16) C
ID: PCALC8 5.6.2–5
Objective: (5.6) Solve Exponential Equations

17) C
ID: PCALC8 5.7.4–6
Objective: (5.7) Determine the Rate of Interest or Time

18) C
ID: PCALC8 5.8.4–4
Objective: (5.8) Use Logistic Models

19) D
ID: PCALC8 6.1.3–4
Objective: (6.1) Convert from Degrees to Radians and

20) D
ID: PCALC8 6.1.4–13
Objective: (6.1) Find the Area of a Sector of a Circle

21) B
ID: PCALC8 6.2.4–3
Objective: (6.2) Find the Exact Values of the Trigonometric

22) A
ID: PCALC8 6.2.4–8
Objective: (6.2) Find the Exact Values of the Trigonometric

23) A
ID: PCALC8 6.3.2–2
Objective: (6.3) Determine the Period of the Trigonometric

24) A
ID: PCALC8 6.6.1–23
Objective: (6.6) Graph Sinusoidal Functions of the Form y

25) A
ID: PCALC8 7.2.1–9
Objective: (7.2) Find the Exact Value of Expressions

26) D
ID: PCALC8 7.2.1–27
Objective: (7.2) Find the Exact Value of Expressions

27) C
ID: PCALC8 7.3.1–6
Objective: (7.3) Use Algebra to Simplify Trigonometric

28) C
ID: PCALC8 7.4.1–35
Objective: (7.4) Use Sum and Difference Formulas to Find

29) A
ID: PCALC8 7.5.1–1
Objective: (7.5) Use Double–angle Formulas to Find Exact

30) B
ID: PCALC8 7.5.1–23
Objective: (7.5) Use Double–angle Formulas to Find Exact

31) D
ID: PCALC8 7.6.1–11
Objective: (7.6) Express Products as Sums

32) B
ID: PCALC8 7.6.2–3
Objective: (7.6) Express Sums as Products

33) A
ID: PCALC8 7.7.1–3
Objective: (7.7) Solve Equations Involving a Single

34) C
ID: PCALC8 7.8.2–2
Objective: (7.8) Solve Trigonometric Equations Using

35) A
ID: PCALC8 8.1.1–10
Objective: (8.1) Find the Value of Trigonometric Functions

36) A
ID: PCALC8 8.2.3–2
Objective: (8.2) Solve Applied Problems

37) D
ID: PCALC8 8.2.3–9+
Objective: (8.2) Solve Applied Problems

38) A
ID: PCALC8 8.4.1–2+
Objective: (8.4) Find the Area of SAS Triangles

39) B
ID: PCALC8 8.4.2–9+
Objective: (8.4) Find the Area of SSS Triangles

40) B
ID: PCALC8 8.5.1–1
Objective: (8.5) Find an Equation for an Object in Simple

41) C
ID: PCALC8 9.1.2–1
Objective: (9.1) Convert from Polar Coordinates to

42) A
ID: PCALC8 9.1.4–2
Objective: (9.1) Transform Equations from Polar to

43) D
ID: PCALC8 9.3.3–6
Objective: (9.3) Find Products and Quotients of Complex

44) C
ID: PCALC8 9.3.3–8
Objective: (9.3) Find Products and Quotients of Complex

45) B
ID: PCALC8 9.3.4–4
Objective: (9.3) Use De Moivre's Theorem

46) B
ID: PCALC8 9.5.2–2
Objective: (9.5) Find the Angle Between Two Vectors

47) D
ID: PCALC8 9.5.2–6
Objective: (9.5) Find the Angle Between Two Vectors

48) A
ID: PCALC8 9.5.5–5
Objective: (9.5) Decompose a Vector into Two Orthogonal

49) D
ID: PCALC8 10.2.2–10
Objective: (10.2) Analyze Parabolas with Vertex at (h, k)

50) A
ID: PCALC8 10.3.2–5
Objective: (10.3) Analyze Ellipses with Center at (h, k)

51) C
ID: PCALC8 10.4.3–3
Objective: (10.4) Analyze Hyperbolas with Center at (h, k)

52) C
ID: PCALC8 10.5.2–2
Objective: (10.5) Use a Rotation of Axes to Transform

53) B
ID: PCALC8 10.6.2–3
Objective: (10.6) Convert the Polar Equation of a Conic to

54) A
ID: PCALC8 10.7.2–1
Objective: (10.7) Find a Rectangular Equation for a Curve

55) D
ID: PCALC8 10.7.2–2
Objective: (10.7) Find a Rectangular Equation for a Curve

56) C
ID: PCALC8 10.7.2–3
Objective: (10.7) Find a Rectangular Equation for a Curve

57) B
ID: PCALC8 10.7.2–3
Objective: (10.7) Find a Rectangular Equation for a Curve

58) D
ID: PCALC8 10.7.2–4
Objective: (10.7) Find a Rectangular Equation for a Curve

59) A
ID: PCALC8 10.7.2–5
Objective: (10.7) Find a Rectangular Equation for a Curve

60) D
ID: PCALC8 10.7.2–6
Objective: (10.7) Find a Rectangular Equation for a Curve