[1] D

[2] C

[3] D

[4] C

[5] D

[6] C

[7] D

[8] B

[9] A

[10] B

[11] C

[12] C

[13] D

[14] D

[15] B

[16] A

[17] B

[18] A

[19] B

[20] A

[21] 12 hr

[22] 27.7

[23] $-6+5i$

[24] $\dfrac{1}{2}$

[25] 0.475

[26] $f(g(3)) = 5$

[27] 17.75 m^2

ANSWER KEY

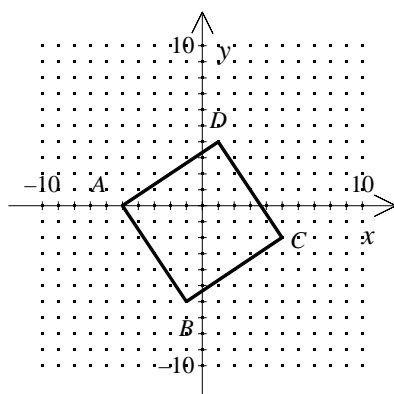[28] $\dfrac{7 \pm i\sqrt{63}}{8}$

[29] $f(x) = 290(0.87)^{x}$; 145

[30] $(x-3)^{2} + \dfrac{(y-3)^{2}}{4} = 1$; The figure is an ellipse.

[31] 12.0

[32] $0.4x^{3} + 0.4x^{2} + 0.4x + 0.2$; 585.4 thousand

[33] $A = 59.1°, B = 42.4°, C = 78.6°$

1. Quadrilateral $ABCD$ with $A(-5, 0)$, $B(-1, -6)$, $C(5, -2)$, $D(1, 4)$	1. Given
2. slope of $\overline{AB} = \dfrac{-6 - 0}{-1 - (-5)} = -\dfrac{3}{2}$	2. Definition of slope
slope of $\overline{BC} = \dfrac{-2 - (-6)}{5 - (-1)} = \dfrac{2}{3}$	
slope of $\overline{CD} = \dfrac{4 - (-2)}{1 - 5} = -\dfrac{3}{2}$	
slope of $\overline{AD} = \dfrac{0 - 4}{-5 - 1} = \dfrac{2}{3}$	
3. $AB \perp BC$, $BC \perp CD$, $CD \perp AD$, $AD \perp AB$	3. Any two lines whose slopes are negative reciprocals are $\perp$.
4. $\angle ABC$, $\angle BCD$, $\angle CDA$, and $\angle DAC$ are right angles.	4. Definition of $\perp$
[34] 5. $ABCD$ is a rectangle	5. Definition of a rectangle