

## ANSWER KEY

- [1] D
- [2] D
- [3] D
- [4] D
- [5] A
- [6] D
- [7] D
- [8] D
- [9] C
- [10] D
- [11] A
- [12] D
- [13] B
- [14] A
- [15] C
- [16] C
- [17] D
- [18] B
- [19] B
- [20] C
- [21]  $4\frac{1}{5}$  hr
- [22] 38
- [23]  $-4 - 3i$
- [24]  $\frac{26}{27}$
- [25] 0.16
- [26]  $g(f(5)) = 2$

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[27]  $221.72 \text{ m}^2$

[28]  $\frac{11 \pm i\sqrt{23}}{8}$

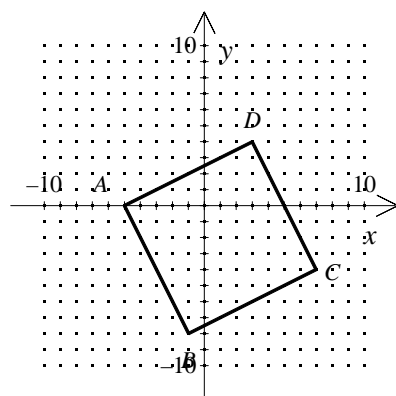
[29]  $f(x) = 210(0.78)^x$ ; 61

[30]  $\frac{(x+4)^2}{4} - (y-6)^2 = 1$ ; The figure is a hyperbola.

[31] 7.5

[32]  $0.2x^3 + 0.2x^2 + 0.3x + 0.5$ ; 294.2 thousand

[33]  $A = 45.6^\circ$ ,  $B = 76.9^\circ$ ,  $C = 57.6^\circ$



1. Quadrilateral  $ABCD$  with  $A(-5, 0)$ ,

$B(-1, -8)$ ,  $C(7, -4)$ ,  $D(3, 4)$

2. slope of  $\overline{AB} = \frac{-8 - 0}{-1 - (-5)} = -2$

slope of  $\overline{BC} = \frac{-4 - (-8)}{7 - (-1)} = \frac{1}{2}$

slope of  $\overline{CD} = \frac{4 - (-4)}{3 - 7} = -2$

slope of  $\overline{AD} = \frac{0 - 4}{-5 - 3} = \frac{1}{2}$

3.  $AB \perp BC$ ,  $BC \perp CD$ ,

$CD \perp AD$ ,  $AD \perp AB$

4.  $\angle ABC$ ,  $\angle BCD$ ,  $\angle CDA$ , and

$\angle DAC$  are right angles.

[34] 5.  $ABCD$  is a rectangle

1. Given

2. Definition of slope

3. Any two lines whose slopes are negative reciprocals are  $\perp$ .

4. Definition of  $\perp$

5. Definition of a rectangle