

## ANSWER KEY

- [1] B
- [2] D
- [3] D
- [4] D
- [5] D
- [6] A
- [7] C
- [8] C
- [9] A
- [10] A
- [11] B
- [12] D
- [13] B
- [14] D
- [15] B
- [16] C
- [17] C
- [18] D
- [19] A
- [20] A
- [21]  $4\frac{4}{9}$  hr
- [22] 14.3
- [23]  $-6 + 7i$
- [24]  $\frac{7}{9}$
- [25] 0.34
- [26]  $f(g(-4)) = -22$

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[27]  $36.23 \text{ m}^2$

[28]  $\frac{5 \pm i\sqrt{227}}{18}$

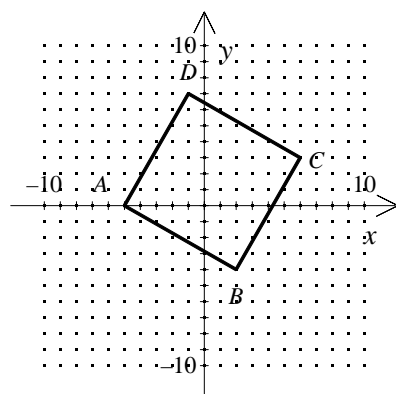
[29]  $f(x) = 280(1.14)^x$ ; 539

[30]  $(x+7)^2 + (y-7)^2 = 2$ ; The figure is a circle.

[31] 6.7

[32]  $0.1x^3 + 0.5x^2 + 0.3x + 0.3$ ; 197.2 thousand

[33]  $A = 69.1^\circ$ ,  $B = 53.2^\circ$ ,  $C = 57.7^\circ$



1. Quadrilateral  $ABCD$  with  $A(-5, 0)$ ,  $B(2, -4)$ ,  $C(6, 3)$ ,  $D(-1, 7)$

2. slope of  $\overline{AB} = \frac{-4 - 0}{2 - (-5)} = -\frac{4}{7}$

    slope of  $\overline{BC} = \frac{3 - (-4)}{6 - 2} = \frac{7}{4}$

    slope of  $\overline{CD} = \frac{7 - 3}{-1 - 6} = -\frac{4}{7}$

    slope of  $\overline{AD} = \frac{0 - 7}{-5 - (-1)} = \frac{7}{4}$

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