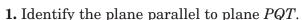## 3    Chapter 3 Test, Form 2A

SCORE _____

**Write the letter for the correct answer in the blank at the right of each question.**

**For Questions 1 and 2, refer to the figure at the right.**

**1.** Identify the plane parallel to plane *PQT*.
   **A** plane *PQS*              **C** plane *RSV*
   **B** plane *PTS*              **D** plane *TUW*

1. _____

**2.** Which segment is skew to $\overline{RV}$?
   **F** $\overline{RS}$          **G** $\overline{RQ}$          **H** $\overline{SW}$          **J** $\overline{SP}$

2. _____

**For Questions 3–10, refer to the figure at the right.**
**Identify the special name for each angle pair.**

**3.** $\angle 3$ and $\angle 10$
   **A** alternate exterior              **C** consecutive interior
   **B** alternate interior              **D** corresponding

3. _____

**4.** $\angle 9$ and $\angle 13$
   **F** alternate exterior              **H** consecutive interior
   **G** alternate interior              **J** corresponding

4. _____

**5.** Given $p \parallel q$ and $m\angle 3 = 75$, find $m\angle 5$.
   **A** 15          **B** 75          **C** 105          **D** 120

5. _____

**6.** Given $p \parallel q$, $m\angle 10 = 3x - 7$, and $m\angle 13 = 4x - 9$, find the value of $x$.
   **F** −2          **G** 2          **H** 16          **J** 28

6. _____

**7.** Given $\angle 1 \cong \angle 5$, which postulate or theorem justifies that $p \parallel q$?
   **A** Corresponding Angles Postulate
   **B** Consecutive Interior Angles Theorem
   **C** Alternate Exterior Angles Theorem
   **D** Alternate Interior Angles Theorem

7. _____

**8.** Given $\angle 12 \cong \angle 14$, which postulate or theorem justifies that $p \parallel q$?
   **F** Corresponding Angles Postulate
   **G** Consecutive Interior Angles Theorem
   **H** Alternate Exterior Angles Theorem
   **J** Alternate Interior Angles Theorem

8. _____

**9.** If $p \parallel q$ by the Consecutive Interior Angles Theorem, which angle pair must
be supplementary?
   **A** $\angle 3$ and $\angle 10$     **B** $\angle 3$ and $\angle 8$     **C** $\angle 8$ and $\angle 13$     **D** $\angle 15$ and $\angle 16$

9. _____

**10.** If $m\angle 4 = 7x - 20$ and $m\angle 8 = 5x + 18$, find the value of $x$ so that $p \parallel q$.
   **F** 219          **G** −1          **H** 1          **J** 19

10. _____

## 3    Chapter 3 Test, Form 2A *(continued)*

**Determine the slope of the line that contains the given points.**

**11.** $P(-6, 3)$, $Q(12, 9)$

   **A** $-3$        **B** $-\dfrac{1}{3}$        **C** $\dfrac{1}{3}$        **D** $3$        **11.** _____

**12.** $M(-8, 14)$, $N(2, -11)$

   **F** $-\dfrac{5}{2}$        **G** $-\dfrac{2}{5}$        **H** $\dfrac{2}{5}$        **J** $\dfrac{5}{2}$        **12.** _____

**13.** Given $A(-1, 4)$, $B(1, 5)$, and $C(-5, 3)$, which coordinate will make $\overline{AB}$ parallel to $\overline{CD}$?

   **A** $D(-7, 4)$     **B** $D(-6, 1)$     **C** $D(-4, 5)$     **D** $D(-3, 4)$     **13.** _____

**14.** Given $A(2, 3)$, $B(8, 7)$, and $C(6, 1)$, which coordinate will make $\overline{AB}$ perpendicular to $\overline{CD}$?

   **F** $D(3, 3)$     **G** $D(4, 4)$     **H** $D(8, 4)$     **J** $D(9, 3)$     **14.** _____

**15.** Which is an equation of the line with slope $\dfrac{1}{2}$ that contains $(-4, 7)$?

   **A** $y - 7 = \frac{1}{2}(x + 4)$          **C** $y - 7 = -4x + \frac{1}{2}$

   **B** $y - 7 = \frac{1}{2}(x - 4)$          **D** $y + 7 = \frac{1}{2}(x + 4)$     **15.** _____

**16.** Which is an equation of the line with $x$-intercept 2 and $y$-intercept 12?

   **F** $y = -6x + 12$    **G** $y = 2x + 12$    **H** $y = 6x + 12$    **J** $y = 12x + 2$    **16.** _____

**17.** Which is an equation of the line containing $(1, -3)$ and $(7, 15)$?

   **A** $y = -3x + 8$    **B** $y = 3x$    **C** $y = 3x - 6$    **D** $y = 3x - 10$    **17.** _____

**18** Mr. Perugia gives 4 points per question for $q$ questions on English quizzes plus 5 points for a bonus question. Which equation represents the total score, $T$, a student can receive on a quiz?

   **F** $T + 5 = 4q$    **G** $T = 4q + 5$    **H** $T = 4(q + 5)$    **J** $4T = q + 5$    **18.** _____

**19.** What is the distance from $D$ to $t$, shown in the figure?

   **A** $2$
   **B** $3$
   **C** $5$
   **D** $\sqrt{5}$                                      **19.** _____

**20.** What is the distance between parallel lines whose equations are $y = 2x + 7$ and $y = 2x - 3$?

   **F** $\sqrt{2}$        **G** $\sqrt{5}$        **H** $2\sqrt{5}$        **J** $4\sqrt{2}$     **20.** _____

**Bonus** Suppose Ian reads at the rate of 15 pages an hour. Write an equation to represent the number of pages, $y$, Ian will still need to read after reading $x$ hours of a 285-page novel. How long will it take Ian to read the entire novel?   **B:** _____