Unit B (Angles) Exam Review + Euclidean Geometry
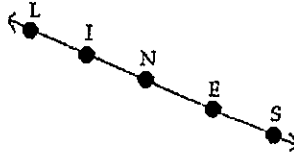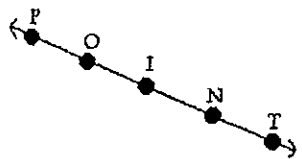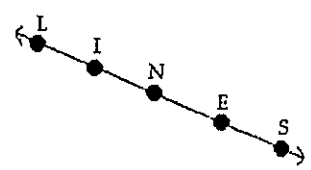
1. Give another name for $\overrightarrow{SN}$.

1. _____

2. If $PT = 40$, $OT = 26$, and $ON = 21.8$, find PN.
   (diagram not to scale)

2. _____

3. Are $\overrightarrow{NS}$ and $\overrightarrow{SN}$ the same set of points? Explain...
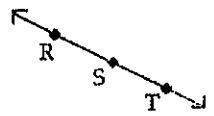
   _____

   _____

4. Refer to the figures below.

   I.   II.   III.

   a. Which figure is a convex pentagon?

   4a. _____

   b. Which figure is a nonconvex pentagon?

   b. _____

5. On the number line below, point R has coordinate
   59 and point S has coordinate 138. If point S is the
   midpoint of $\overline{RT}$, what is the coordinate of T?
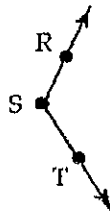
5. _____

6. Two points are 19 units apart on a number line.
   The coordinate of one point is -13. What are the
   possible coordinates of the other?

6. _____

7. ∠*WYB* is an obtuse angle, and YM is its bisector. Draw a picture of this situation.

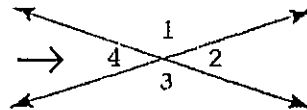8. On the figure, sketch an angle that is vertical to ∠*RST*.

R

S

T

9. Refer to the figure.

a. Find m∠3 if m∠1 = 155°. 9a. _____

b. Find m∠3 if m∠2 = $3n°$. b. _____

1
4   2
3

10. Suppose ∠6 and ∠7 are complementary with m∠6 = (4*r* + 5) and m∠7 = (9*r* - 6).
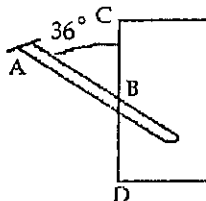
a. Find *r*. 10a. _____

b. Find m∠6. b. _____

11. A nail is being driven into a wall to hang a picture. 11. _____
    If the measure of ∠*ABC* is 36°, what is the
    measure of ∠*ABD*.

36° C

A

B

D

12. $\angle 1$ and $\angle 2$ are vertical angles. If $m\angle 1 = 14s$ and   12. _____
     $m\angle 2 = 42°$, find s.

13. In the figure below, $h \,/\!/\, k$. Suppose that $m\angle 7 = 72°$.

   a. Find $m\angle 1$.   13a. _____
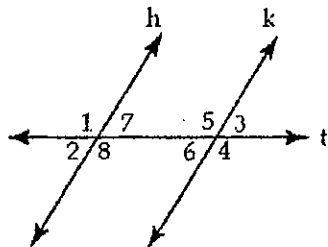
   b. Find $m\angle 5$.   b. _____

   c. Find $m\angle 6$.   c. _____

14. In the figure below, $h \,/\!/\, k$. Suppose that
     $m\angle 2 = (7y - 38)$ and $m\angle 3 = (3y + 10)$.
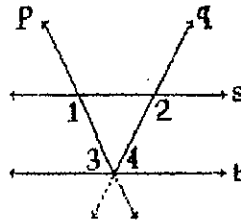
   a. Find y.   14a. _____
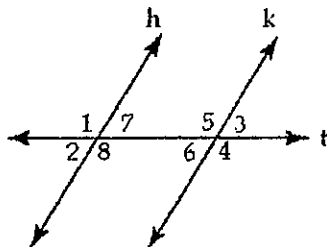
   b. Find $m\angle 6$.   b. _____

15. **Multiple Choice.** Use the figure below. If $m\angle 2 = 90°$, which   15. _____
     statement justifies the conclusion that $\angle 2$ is a right angle.

   A. Linear Pair Theorem   B. Definition of supplementary angles

   C. Definition of a right angle   D. Definition of perpendicular lines

16.   In the figure below, *s // t.* If m∠4 = 37° and   16. _____
      m∠3 = 42°, find m∠1 and m∠2.

                                                              _____

For 18-20, J = {x ≥ 18} and K = {x ≤ 19}.

18.   a.   Draw J = {x ≥ 18} on a number line.

      b.   Draw K = {x ≤ 19} on a number line.

19.   Give J ∪ K.   19. _____

20.   Give J ∩ K.   20. _____
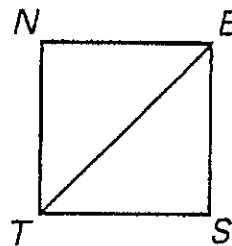
In 21-23, refer to the figure below.

21.   List the points of ∆*NET* ∩ $\overline{ES}$.   21. _____

22.   List the points of ∆*NET* ∪ ∆*TES*.   22. _____

23.   Give $\overline{NT}$ ∩ $\overline{ES}$.   23. _____