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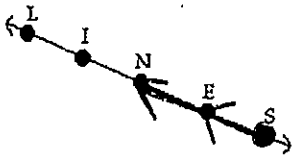
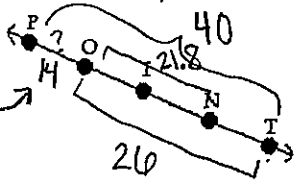
Unit B Exam Review

1. Give another name for $\overrightarrow{SN}$.



1. $\overrightarrow{SE}$

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

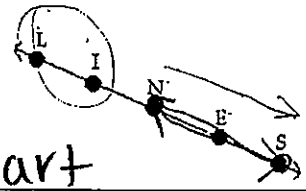


40 - 26 = 14

14 + 21.8 = 35.8

2. 35.8

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



No, since L & I are not part of $\overrightarrow{NS}$.

4. Refer to the figures below.

I. 

II. 

III. 

a. Which figure is a convex pentagon?

↳ ∅ dips & shaded

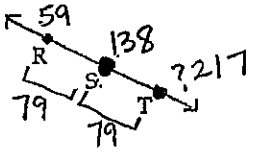
4a. I

b. Which figure is a nonconvex pentagon?

↳ dip, ∅ shaded

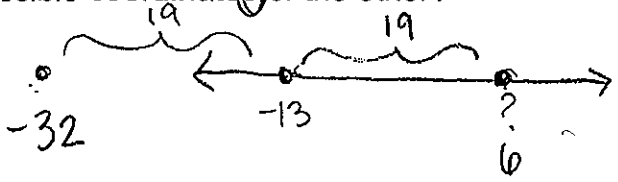
b. II, III

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. 217

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. -32 or 6

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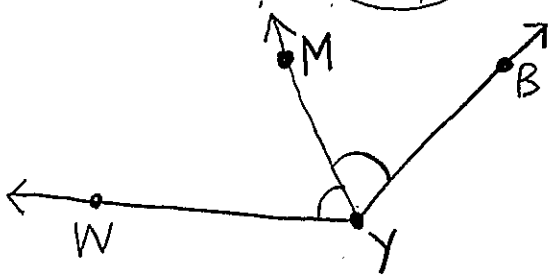
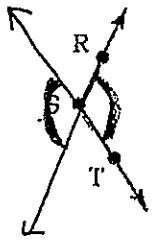
7. $\angle WYB$ is an obtuse angle, and YM is its bisector. Draw a picture of this situation.

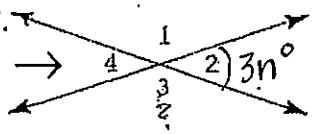
cuts in ½



8. On the figure, sketch an angle that is vertical to $\angle RST$.



9. Refer to the figure.



a. Find $m\angle 3$ if $m\angle 1 = 155°$. 9a. 155°

b. Find $m\angle 3$ if $m\angle 2 = 3n°$. b. 180 - 3n

10. Suppose $\angle 6$ and $\angle 7$ are complementary with $m\angle 6 = (4r + 5)$ and $m\angle 7 = (9r - 6)$.

4·7+5

add to 90°

a. Find r. $4r+5+9r-6=90$

$13r-1=90$

$+1 \quad +1$

$\frac{13r}{13} = \frac{91}{13}$

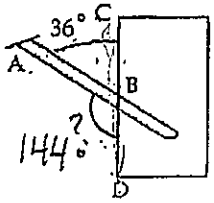
10a. r = 7

b. Find $m\angle 6$. b. $\angle 6 = 33°$

11. A nail is being driven into a wall to hang a picture. If the measure of $\angle ABC$ is 36°, what is the measure of $\angle ABD$.

11. 144°

180 - 36



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

equal

$\frac{14s}{14} = \frac{42°}{14}$

$s = 3$

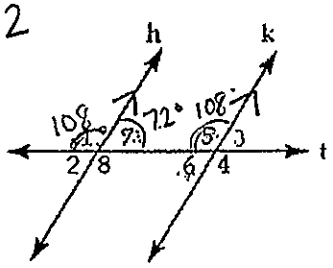
12. $s = 3$

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

a. Find $m\angle 1$. $180 - 72$

b. Find $m\angle 5$.

c. Find $m\angle 6$.



13a. $108°$

b. $108°$

c. $72°$

14. In the figure below, $h \parallel k$. Suppose that $m\angle 2 = (7y - 38)$ and $m\angle 3 = (3y + 10)$.

$7y - 38 = 3y + 10$

$-3y \quad -3y$

$4y - 38 = 10$

$+38 \quad +38$

$\frac{4y}{4} = \frac{48}{4}$

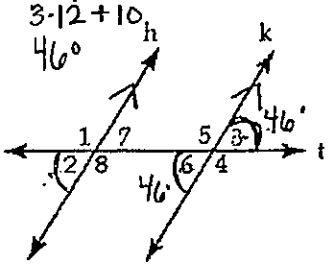
$y = 12$

a. Find y.

b. Find $m\angle 6$.

$3 \cdot 12 + 10$

$46°$



14a. $y = 12$

b. $46°$

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

15. C

A. Linear Pair Theorem

B. Definition of supplementary angles

C. Definition of a right angle

D. Definition of perpendicular lines

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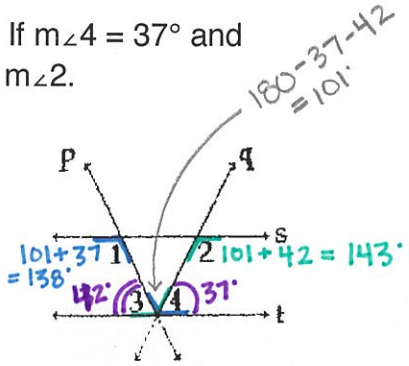
16. In the figure below, $s \parallel t$. If $m\angle 4 = 37°$ and $m\angle 3 = 42°$, find $m\angle 1$ and $m\angle 2$.

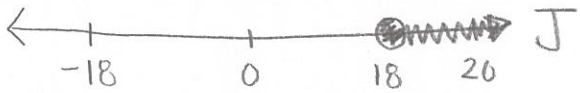


16. $\angle 1 = 138°$

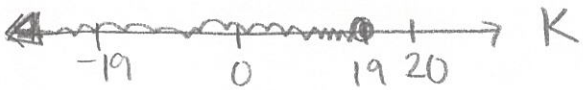
$\angle 2 = 143°$

For 18-20, J = {$x \geq 18$} and K = {$x \leq 19$}.

18. a. Draw J = {$x \geq 18$} on a number line.



b. Draw K = {$x \leq 19$} on a number line.



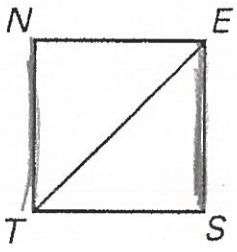
19. Give J ∪ K. (all)

19. all real #'s

20. Give J ∩ K. (shared)

20. $18 \leq x \leq 19$

In 21-23, refer to the figure below.



21. List the points of $\Delta NET \cap \overline{ES}$. (shared)

21. {E}

22. List the points of $\Delta NET \cup \Delta TES$. (all)

22. {N, E, T, S}

23. Give $\overline{NT} \cap \overline{ES}$. (shared)

23. {} or $\emptyset$