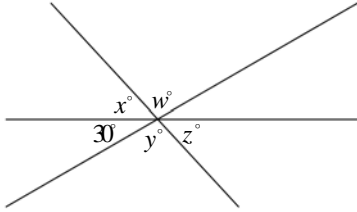
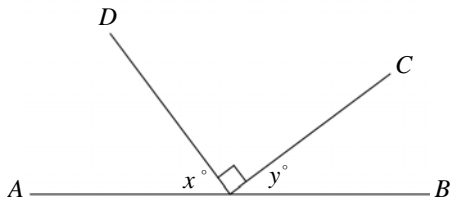


UB SAT 2009
Worksheet #19
Lines and Angles



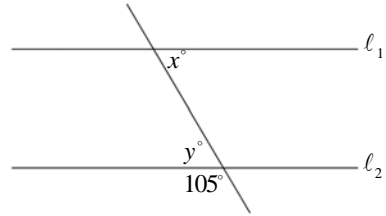
1. In the figure above, $w + x + y + z =$
- (A) 330
(B) 300
(C) 270
(D) 240
(E) 210



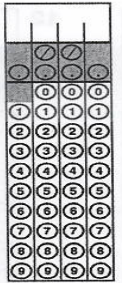
2. In the figure above, what is the value of $x + y$?
- (A) 30
(B) 60
(C) 90
(D) 110
(E) It cannot be determined from the information given.



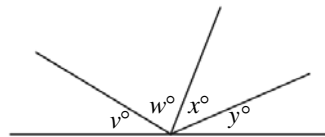
3. In \overline{PS} above, $PQ = 3$, $RS = 4$, and $PS = 10$. What is the distance from S to the midpoint of \overline{QR} ?
- (A) 4.5
(B) 5.5
(C) 6
(D) 6.5
(E) 7



4. In the figure above, if $l_1 \parallel l_2$, then what is the value of $x + y$?



5. What is the measure, in degrees, of the smaller of 2 angles that together form a straight line if the ratio of the measure of the larger angle to the smaller angle is 7 to 2?
- (A) 30
(B) 40
(C) 50
(D) 80
(E) 140

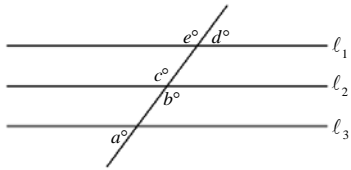


Note: Figure not drawn to scale.

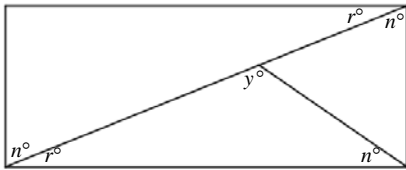
6. In the figure above, $v = 2w$, $w = 2x$, and $x = \frac{y}{3}$.

What is the value of y ?

- (A) 18
(B) 36
(C) 45
(D) 54
(E) 60



7. In the figure above, $l_1 \parallel l_2$ and $l_2 \parallel l_3$. What is the value of $a + b + c + d + e$?
- (A) 180
 (B) 270
 (C) 360
 (D) 450
 (E) It cannot be determined from the information given

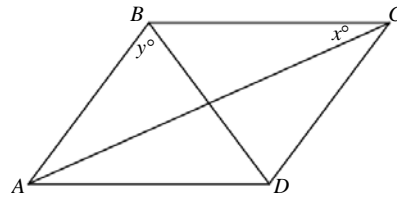


Note: Figure not drawn to scale.

8. In the rectangle above, what is the value of y ?
- (A) 85
 (B) 90
 (C) 95
 (D) 100
 (E) 120

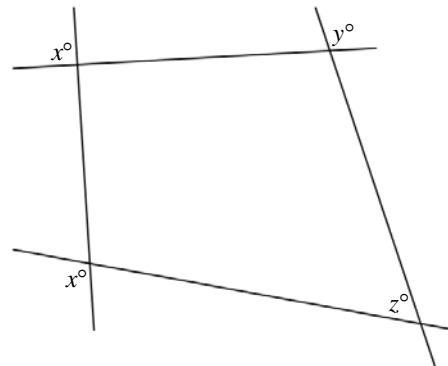
9. $A, B, C, D,$ and E are all distinct points that lie in the same plane. If $\overline{AB} \parallel \overline{CD}$ and $\overline{AC} \parallel \overline{BD}$, then which of the following is a set of points all of which could lie on the same line?
- (A) $\{A, B, C, D\}$
 (B) $\{B, C, D, E\}$
 (C) $\{C, D, E\}$
 (D) $\{A, C, D\}$
 (E) $\{A, B, D\}$

10. On a number line, point D is $\frac{2}{5}$ of the way from point C to point E and is located at -2 . If C is at -10 , what is the coordinate of point E ?
- (A) -4
 (B) 4
 (C) 5
 (D) 10
 (E) 20



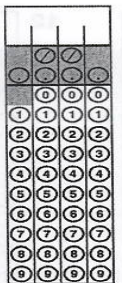
Note: Figure not drawn to scale.

11. If $ABCD$, shown above, is a parallelogram and $\overline{AD} = \overline{CD}$, then which of the following must be true?
- I. $\overline{BD} \perp \overline{AC}$
 II. The measure of $\angle A =$ the measure of $\angle B$
 III. $x = y$
- (A) I only
 (B) II only
 (C) I and II only
 (D) II and III only
 (E) None



Note: Figure not drawn to scale.

12. In the figure above, $x = 110$ and $y = 105$. What is the value of z ?



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Answers

1. B

2. C

3. C

4. 150

5. B

6. D

7. E

8. B

9. C

10. D

11. A

12. 35