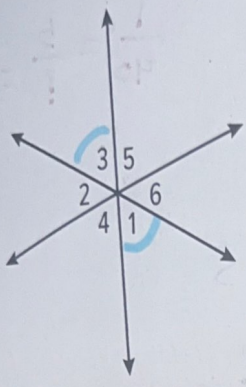
Name أجيال المستقبل Period Mrs Ayo Date 05/17/2602

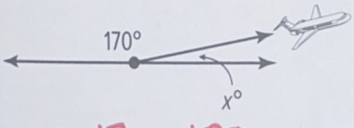
Test Practice

1. **Table Item** Place an X in each cell to indicate whether each pair of angles represents a pair of vertical angles, adjacent angles, or neither. (Lesson 1)



	vertical	adjacent	neither
∠1 and ∠3	X		
∠5 and ∠6		X	
∠5 and ∠4	X		
∠1 and ∠2			X

2. **Equation Editor** The diagram represents the trajectory of an airplane at take off. The angle that represents the trajectory of a jet is 15% greater than the trajectory of the airplane. How many degrees does the trajectory angle of the jet measure? (Lesson 2)



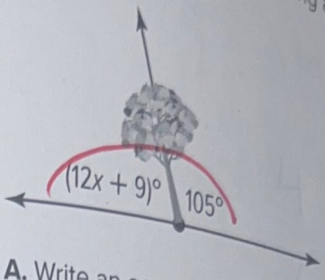
$x + 170 = 180$ $x = 10$

$-170 \quad -170$

$\frac{10 \times 15}{100} = \frac{150}{100} = 1.5$

$10 + 1.5 = 11.5$

3. **Open Response** A tree is leaning as shown in the figure. (Lesson 2)



A. Write an equation that can be used to find the value of x. Explain your reasoning.

$12x + 9 + 105 = 180$

$12x + 114 = 180$

$-114 \quad -114$

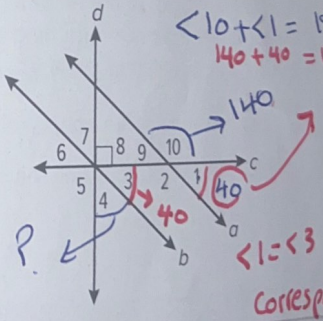
$12x = 66$ $x = 5.5$

$12 \quad 12$

B. What is the value of x? What is the measure of the acute angle formed by the tree and the ground?

5.5, $(12 \times 5.5) + 9 = 75$

4. **Equation Editor** In the figure, line a is parallel to line b, and line c is perpendicular to line d. The measure of ∠10 is 140°. What is the measure, in degrees, of ∠4? (Lesson 3)



$\angle 10 + \angle 1 = 180$

$140 + 40 = 180$

140

40

40

$\angle 1 = \angle 3$

Corresponding

$\angle 4 + \angle 3 + \angle 8 = 180$

$x + 40 + 90 = 180$ $x + 130 = 180$

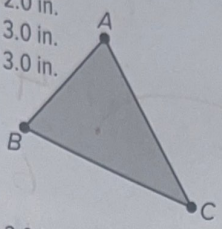
$-130 \quad -130$

$x = 50$

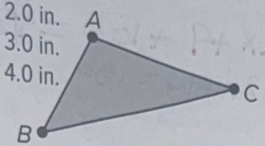
$\angle 4 = 50$

5. **Multiple Choice** Is it possible to draw a triangle with side lengths of 2, 3, and 5 inches? If yes, select the triangle that meets the given conditions. If not, select the answer that explains why it is not possible. (Lesson 4)

Ⓐ $AB = 2.0$ in.
$AC = 3.0$ in.
$BC = 3.0$ in.



Ⓑ $AB = 2.0$ in.
$AC = 3.0$ in.
$BC = 4.0$ in.



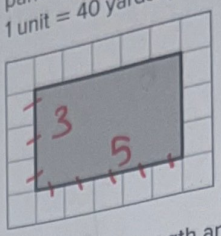
Ⓒ It is not possible to draw the triangle because the sum of two of the side lengths *is* greater than the third side.

Ⓓ It is not possible to draw the triangle because the sum of two of the side lengths *is not* greater than the third side.

6. **Multiselect** In $\triangle JKL$, the measures of the angles J, K, and L, respectively, are in the ratio 3 : 3 : 6. Which of the following statements are accurate regarding the angle measures? Select all that apply. (Lesson 5)

- ☑ Angles J and K have equal measures.
- ☐ The measure of $\angle L$ is half the measure of $\angle J$.
- ☐ $m\angle L = 45°$
- ☐ $m\angle K = 90°$
- ☑ The angles form an isosceles right triangle.
- ☑ The measure of $\angle L$ is twice the measure of $\angle K$.

7. **Open Response** The shaded figure in the diagram below represents a rectangular parking lot. The scale of the drawing is 1 unit = 40 yards. (Lesson 6)



$\frac{1}{40} = \frac{3}{?} = 120$

$\frac{1}{40} = \frac{5}{?} = 200$

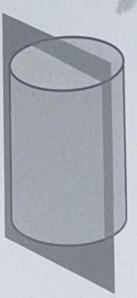
A. What is the length and width of the parking lot in units?

5, 3

B. Suppose the scale drawing is reproduced using a scale of 1 unit = 20 yards. What is the new length and width, in units, of the drawing of the parking lot?

$L = \frac{120}{20} = 6$ $W = \frac{200}{20} = 10$

8. **Multiple Choice** Which of the following describes the cross section of a cylinder and a vertical plane as shown? (Lesson 7)



أجيال المستقبل

Ⓐ circle
Ⓑ ellipse
Ⓒ rectangle
Ⓓ square

9. **Multiple Choice** Which three-dimensional figure has 6 faces, 12 edges, and 8 vertices? (Lesson 7)

Ⓐ rectangular prism
Ⓑ square pyramid
Ⓒ triangular prism
Ⓓ triangular pyramid