CHANNEL VIEW
An Expeditionary Learning School

June 2018
Entering: 212 (Geometry)

Dear Parents:

In our effort to academically prepare your child for the coming school year, the math teachers at Channel View School for Research have prepared a math packet for the summer vacation to help your child reinforce and maintain his/her math skills.

Students are expected to complete all assigned work in the packet. Parents are asked to certify that their child completed the assignment. The math packet will be collected, scored, and reviewed in class. The completed math packet is due to your child's math teacher on the first day of school, **Wednesday, September 5, 2018**.

Working together we can insure maximum success for your child. Your cooperation in this matter is appreciated.

We wish you a happy and healthy summer.

Sincerely,

Mrs. Harper-Richardson
Principal
_____

I certify that my child has completed the required 2018 Summer Vacation Math Assignment.

Student's Name _____ Entering Grade _____

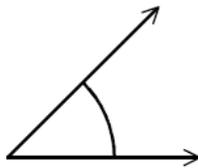Parent's Signature _____ Date _____

Name _____
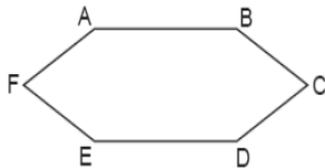
1. The measure of angle B is 136°. Classify angle B .

      A right   B obtuse
      C straight   D acute

2. Estimate the measure of the angle.

    A. about 65 °   B. about 25 °
    C. about 45 °   D. about 180 °

3. Which type of figure is shown in the accompanying diagram?
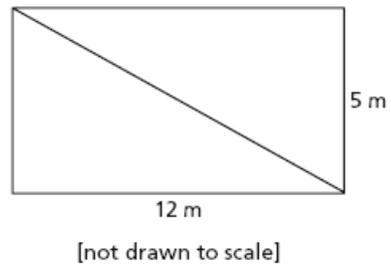

    A. octagon   B. quadrilateral
    C. pentagon   D. hexagon

4. 4. Which equation represents a line that is parallel to the y-axis?

1) $x = 5$
2) $x = 5y$
3) $y = 5$
4) $y = 5x$

5. Mr. Sanders used a diagonal board to divide a rectangular garden into two equal sections as shown in the diagram below.

[not drawn to scale]

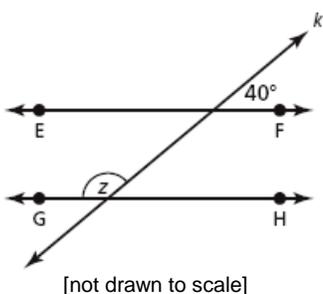What is the length of the diagonal?

    A. 12 meters   B. 13 meters
    C. 14 meters   D. 15 meters

6. Solve the equation below for x.
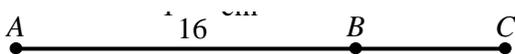
$$9(x - 5) = 4x - 5$$

A. 8   B. 10
C. –8   D. –10

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7. In the diagram below, $\overleftrightarrow{EF}$ is parallel to $\overleftrightarrow{GH}$, and line k intersects both lines.

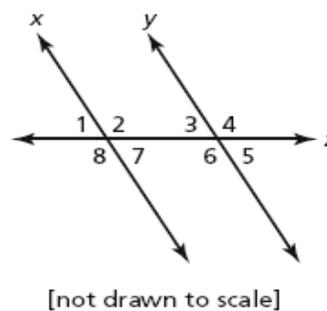[not drawn to scale]

What is the measure of $\angle z$?

A. 40º   B. 50º
C. 130º   D. 140º

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8. If $AB = 53$ and $AC = 81$, find BC.

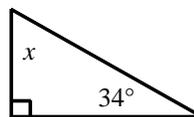A ————— 16 ——— B ———— C

A. 53
B. 134
C. 28
D. 32

9. In the diagram below, line x is parallel to line y, and line z is a transversal.

[not drawn to scale]
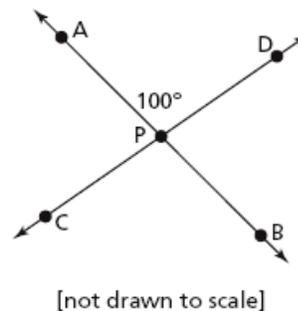
Which angles are alternate interior angles?

A. $\angle 1$ and $\angle 7$ B. $\angle 3$ and $\angle 7$
C. $\angle 2$ and $\angle 3$ D. $\angle 4$ and $\angle 8$

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10. What is the measure of angle x?

A. 124°
B. 146°
C. 56°
D. 112°

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11. In the diagram below, line AB intersects line DC at point P.

[not drawn to scale]

What is the measure of $\angle CPB$ in the figure?

A. 80°   B. 90°
C. 100°   D. 105°

12. In the diagram below, line l and line m are parallel.

(3x + 21)° l

(6x + 15)° m
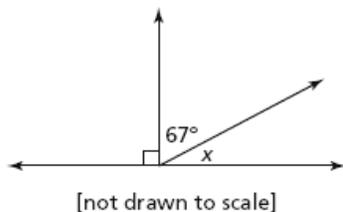
[not drawn to scale]
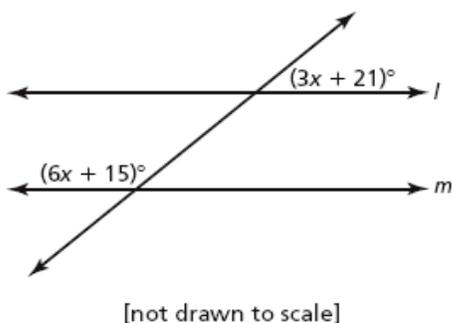
Which equation could be used to solve for x ?

A. 6x + 3x = 15 + 21
B. 6x + 15 = 3x + 21
C. 6x + 15 + 3x + 21 = 90
D. 6x + 15 + 3x + 21 = 180

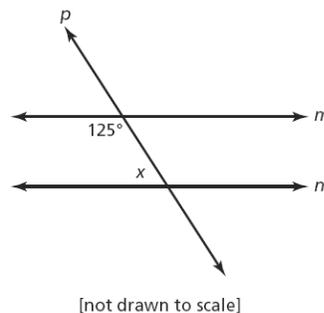13. Which term best describes AC in the right triangle shown below?

A

B   C
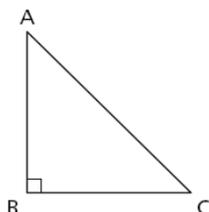
A. leg   B. base
C. altitude   D. hypotenuse

14. What is the measure of ∠x in the diagram shown below?

67°
x

[not drawn to scale]

A. 23°   B. 33°
C. 113°   D. 157°

15. In the diagram below, line m and line n are parallel, and line p is a transversal.

p

125°   m

x   n

[not drawn to scale]

What is the measure of ∠x ?

A. 35°   B. 55°
C. 125°   D. 215°

16. In the rectangle below, which angle is the right angle of a right triangle?

A   B   C

F   E   D

[not drawn to scale]
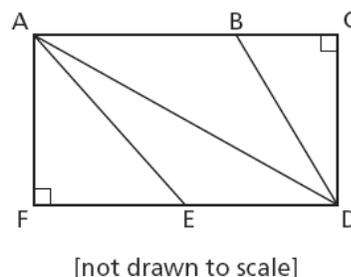
A. ∠BCD   B. ∠AED
C. ∠CDA   D. ∠FAD

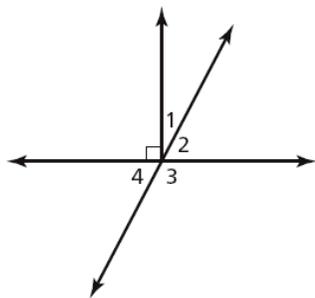17. What is the slope of a line perpendicular to the line whose equation is y = 3x + 4?

A. $\frac{1}{3}$ B. $-\frac{1}{3}$

C. 3   D. -3

18. What is an equation of the line that passes through the point (-2,5) and is perpendicular to the line whose equation is

$$y = \frac{1}{2}x + 5$$

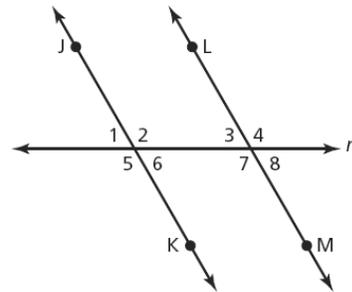A. y = 2x + 1   B. y = -2x + 1
C. y = 2x + 9   D. y = -2x + 9

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19. In the diagram below, which pair of angles is complementary?

[not drawn to scale]

A. ∠1 and ∠2   B. ∠2 and ∠3
C. ∠2 and ∠4   D. ∠3 and ∠4

20. In the diagram below, line JK is parallel to line LM, and line n is a transversal.

[not drawn to scale]

Which two angles must be congruent to ∠4 in the diagram?

A. ∠1 and ∠2   B. ∠1 and ∠6
C. ∠2 and ∠7   D. ∠6 and ∠7

Part II

21. In the diagram below, line JK and line LM are parallel, and line n is a transversal.
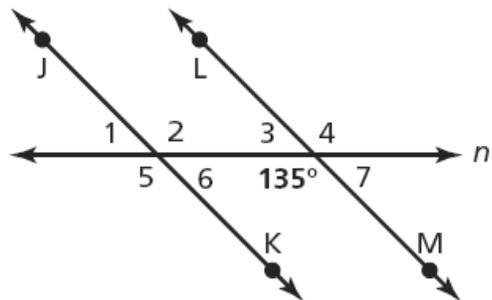
[not drawn to scale]

What is the measure of ∠1?

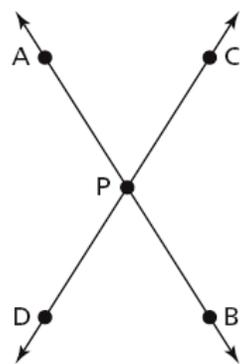On the lines below, explain how you determined your answer.

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_____

_____

_____

_____

22. In the diagram below, line AB and line CD intersect at point P.

[not drawn to scale]

Name the angle that is always congruent to ∠APC.

On the lines below, explain why the two angles are congruent.

_____

_____

_____

_____

_____

23. Michael drew a triangle with the sides measuring 12.5 centimeters, 30 centimeters, and 32.5 centimeters. Using the Pythagorean Theorem, determine if Michael's triangle is a right triangle. On the lines below, explain how you determined your answer.

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