Use the diagram on the right to answer questions 1-7.

1. Is $\angle AED$ acute, right, or obtuse? _____

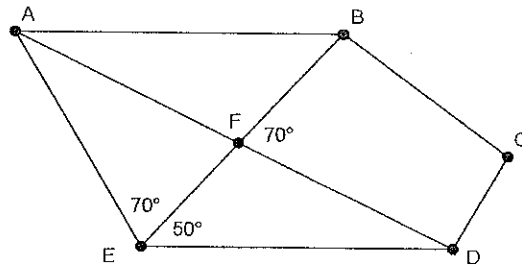2. $\overline{AD} \cap \overline{AF} =$ _____

3. $\overline{FA} \cup \overline{FB} =$ _____
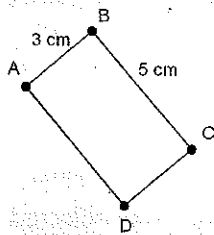
4. $m\angle EFD =$ _____

5. How many angles have vertex at point A? _____

6. Name two congruent angles in the figure _____
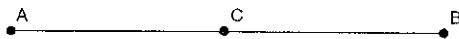
7. Name 3 collinear points _____

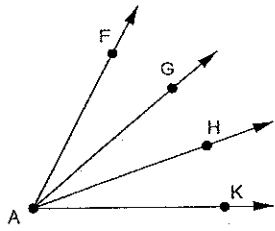8. Find the perimeter and area of the rectangle ABCD:

9. Convert $64°30'$ to degrees.

10. Convert $127\frac{3}{4}°$ to degrees-minutes.

11. If AC=8 and AB=15, is C the midpoint of $\overline{AB}$?

12. $\overline{AG}$ and $\overline{AH}$ trisect $\angle FAK$. If $m\angle HAK = 20°$, what is $m\angle FAK$?
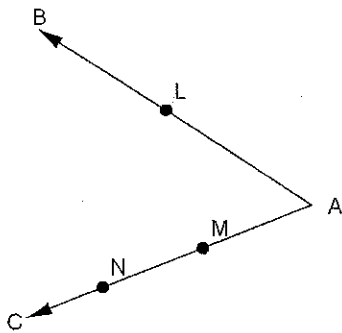
13. Points D and C trisect line segment $\overline{AB}$. What are the coordinates of points D and C?
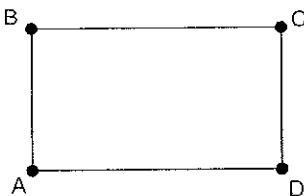
14. Find the measure of the angle formed by the hands of a clock at 7:30.

15. If one of the points L, M and N is selected at random, what is the probability that the point selected will lie on ray $\overline{AC}$?
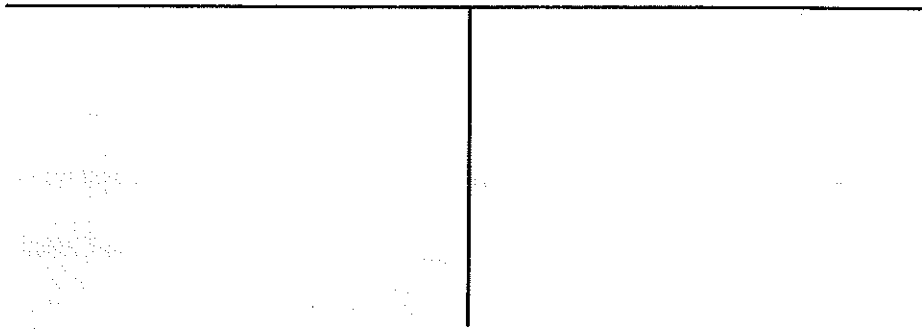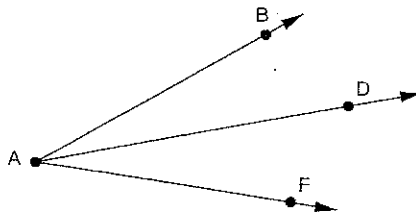
16. The perimeter of rectangle ABCD is 40 ft. If $\overline{BC}$ is 3 times as long as $\overline{CD}$, what is the length of AD?
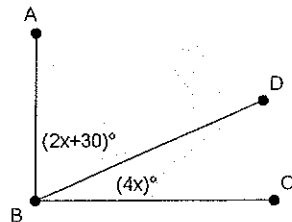
17. Given: $\angle BAD \cong \angle FAD$

Prove: $\overrightarrow{AD}$ bisects $\angle BAF$

18. $\angle ABC$ is a right angle. Find $m\angle DBC$.

$(2x+30)°$

$(4x)°$

For problems 19, 20 and 21, write the CONVERSE, INVERSE, and CONTRAPOSITIVE of the following statement:

"If you live in Arizona, then you live in the United States."

19. Converse: _____

20. Inverse: _____

21. Contrapositive: _____

Geometry, Chapter 1 Review

Use the diagram on the right to answer questions 1-7.

1. Is $\angle AED$ acute, right, or obtuse? *obtuse*

2. $\overline{AD} \cap \overline{AF} = $ *AF*

3. $\overline{FA} \cup \overline{FB} = $ *$\angle AFB$*

4. $m\angle EFD = $ *110°*   *180*
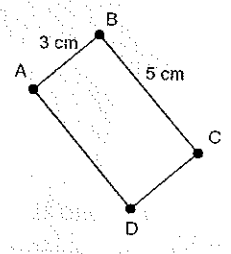   *-70*
   110

5. How many angles have vertex at point A? *3*

6. Name two congruent angles in the figure *$\angle AEF$ & $\angle BFD$*

7. Name 3 collinear points *B, F, E*
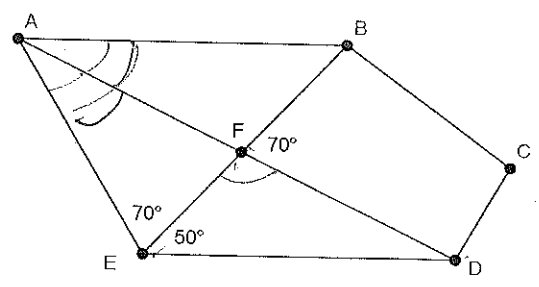
8. Find the perimeter and area of the rectangle ABCD:

$$P = 3 + 5 + 3 + 5 = \boxed{16\ cm}$$

$$A = (3\ cm)(5\ cm) = \boxed{15\ cm^2}$$

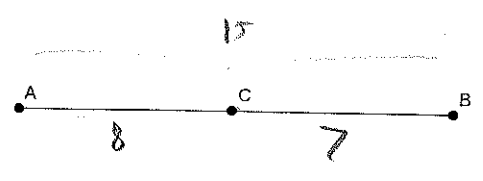9. Convert 64°30' to degrees. $\boxed{64\frac{1}{2}°\ or\ 64.5°}$

$$\frac{30}{60} = \frac{1}{2}$$

10. Convert $127\frac{3}{4}°$ to degrees-minutes.

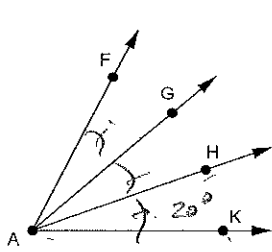$$\frac{3}{4}60 = \frac{3}{4} \cdot \frac{60}{1} = \frac{180}{4}$$ $4\overline{)180}$ = 45 $\boxed{127°45'}$
   $\underline{16}$
   20

11. If AC=8 and AB=15, is C the midpoint of $\overline{AB}$? *No*

   15

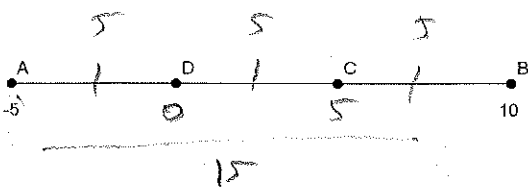   A •———————C•——————————• B
      8   *7*

12. $\overline{AG}$ and $\overline{AH}$ trisect $\angle FAK$. If $m\angle HAK = 20°$, what is $m\angle FAK$?

$\boxed{60°}$

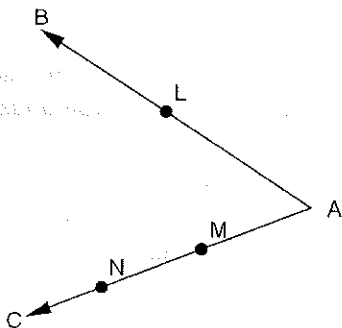13. Points D and C trisect line segment $\overline{AB}$. What are the coordinates of points D and C?

$\boxed{0, 5}$

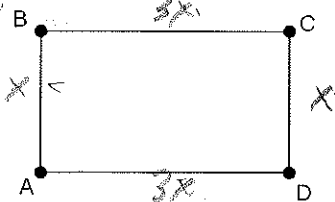14. Find the measure of the angle formed by the hands of a clock at 7:30.

$\dfrac{30}{15}$ $\boxed{45°}$

15. If one of the points L, M and N is selected at random, what is the probability that the point selected will lie on ray $\overrightarrow{AC}$?

$\boxed{\dfrac{2}{3}}$

16. The perimeter of rectangle ABCD is 40 ft. If $\overline{BC}$ is 3 times as long as $\overline{CD}$, what is the length of AD?
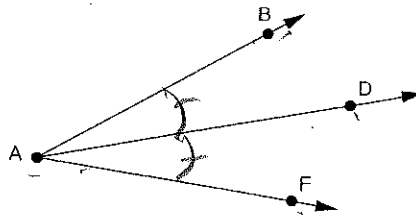
$8x = 40$
$x = \dfrac{40}{8} = 5$ $AD = 3x = 3(5) = \boxed{15\,ft}$
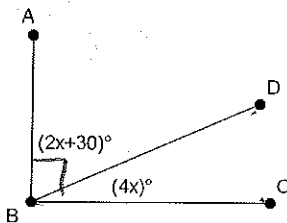$P = x + x + 3x + 3x$

17. Given: $\angle BAD \cong \angle FAD$

Prove: $\overrightarrow{AD}$ bisects $\angle BAF$

1. $\angle BAD \cong \angle FAD$	1. Given
2. $\overrightarrow{AD}$ bisects $\angle BAF$	2. a bisector divides an angle into 2 congruent parts.

18. $\angle ABC$ is a right angle. Find $m\angle DBC$.

$2x+30+4x = 90$

$6x+30 = 90$

$6x = 60$

$x = 10$

$m\angle DBC = 4x = 40°$

For problems 19, 20 and 21, write the CONVERSE, INVERSE, and CONTRAPOSITIVE of the following statement:

"If you live in Arizona, then you live in the United States."

19. Converse: If you live in the United States, then you live in Arizona.

20. Inverse: If you don't live in Arizona, then you don't live in the United States

21. Contrapositive: If you don't live in the United States, then you don't live in Arizona.