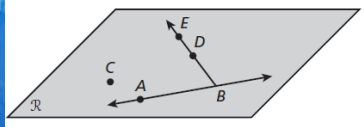
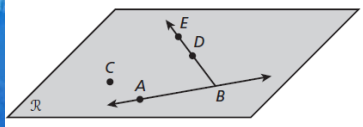
Chapter 1-4 and 6
Finals Review



1. Which points are collinear?

Ⓐ *A*, *B*, and *C* Ⓒ *A*, *B*, and *E*

Ⓑ *B*, *C*, and *D* Ⓓ *B*, *D*, and *E*



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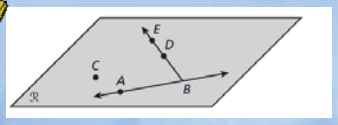
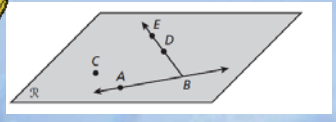


2. What is another name for plane *R*?

Ⓕ Plane $\mathcal{C}$ Ⓗ Plane *ACE*

Ⓖ Plane *AB* Ⓙ Plane *BDE*



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3. *S* is between *R* and *T*. The distance between *R* and *T* is 4 times the distance between *S* and *T*. If *RS* = 18, what is *RT*?

Ⓕ 24 Ⓗ 14.4

Ⓖ 22.5 Ⓙ 6

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F 24 H 14.4
G 22.5 J 6

4. A ray bisects a straight angle into two congruent angles. Which term describes each of the congruent angles that are formed?

A Acute C Right
B Obtuse D Straight

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The measure of an angle is 35°. What is the measure of its complement?

A 35° C 55°
B 45° D 145°

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6. *K* is the midpoint of $\overline{JL}$. *J* has coordinates (2, −1), and *K* has coordinates (−4, 3). What are the coordinates of *L*?

A (3, −2) C (−1, 1)
B (1, −1) D (−10, 7)

6. K is the midpoint of $\overline{JL}$. J has coordinates $(2, -1)$, and K has coordinates $(-4, 3)$. What are the coordinates of L?

(A) $(3, -2)$
(C) $(-1, 1)$
(B) $(1, -1)$
(D) $(-10, 7)$

7. The map coordinates of a campground are $(1, 4)$, and the coordinates of a fishing pier are $(4, 7)$. Each unit on the map represents 1 kilometer. If Alejandro walks in a straight line from the campground to the pier, how many kilometers, to the nearest tenth, will he walk?

(A) 3.5 kilometers
(C) 6.0 kilometers
(B) 4.2 kilometers
(D) 12.1 kilometers

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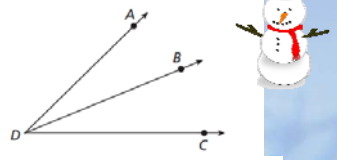
9. $\overrightarrow{DB}$ bisects $\angle ADC$.



Which best describes the intersection of $\angle ADB$ and $\angle BDC$?

(A) Exactly one ray
(B) Exactly one point
(C) Exactly one angle
(D) Exactly one segment

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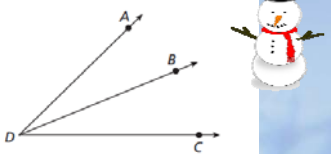

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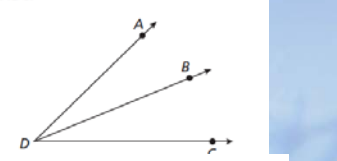

Which expression is equal to the measure of $\angle ADC$?

(F) $2(m\angle ADB)$
(G) $90° - m\angle BDC$
(H) $180° - 2(m\angle ADC)$
(J) $m\angle BDC - m\angle ADB$

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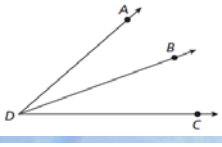

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11. What is the inverse of the statement, "If a polygon has 8 sides, then it is an octagon"?

Ⓐ If a polygon is an octagon, then it has 8 sides.

Ⓑ If a polygon is not an octagon, then it does not have 8 sides.

Ⓒ If an octagon has 8 sides, then it is a polygon.

Ⓓ If a polygon does not have 8 sides, then it is not an octagon.

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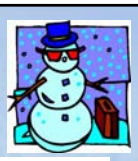
12.

Lily conjectures that if a number is divisible by 15, then it is also divisible by 9. Which of the following is a counterexample?

Ⓕ 45 Ⓗ 60

Ⓖ 50 Ⓙ 72

12.



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13. A diagonal of a polygon connects nonconsecutive vertices. The table shows the number of diagonals in a polygon with n sides.

Number of Sides	Number of Diagonals
4	2
5	5
6	9
7	14

If the pattern continues, how many diagonals does a polygon with 8 sides have?

Ⓐ 17 Ⓒ 20

Ⓑ 19 Ⓓ 21

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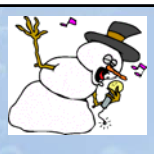

Miyoko went jogging on July 25, July 28, July 31, and August 3. If this pattern continues, when will Miyoko go jogging next?

Ⓐ August 5 Ⓒ August 7

Ⓑ August 6 Ⓓ August 8

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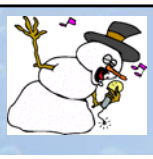

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Which is a counterexample for the following biconditional statement?

A pair of angles is supplementary if and only if the angles form a linear pair.

Ⓕ The measures of supplementary angles add to 180°.

Ⓖ A linear pair of angles is supplementary.

Ⓗ Complementary angles do not form a linear pair.

Ⓙ Two supplementary angles are not adjacent.

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16. K is between J and L. The distance between J and K is 3.5 times the distance between K and L. If $JK = 14$, what is JL?

Ⓐ 10.5 Ⓒ 24.5

Ⓑ 18 Ⓓ 49

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What is the length of the segment connecting the points $(-7, -5)$ and $(5, -2)$?

Ⓕ $\sqrt{13}$ Ⓗ $3\sqrt{17}$

Ⓖ $\sqrt{53}$ Ⓙ $\sqrt{193}$

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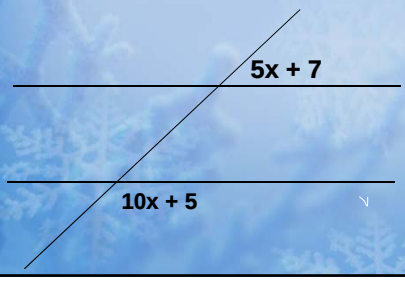
The lines are parallel. Find x.

A) 0.4 B) 8.5 C) 11.2 D) 16.6



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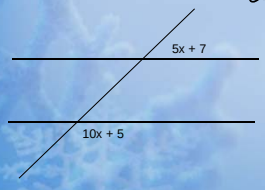


$5x+7+10x+5=180$

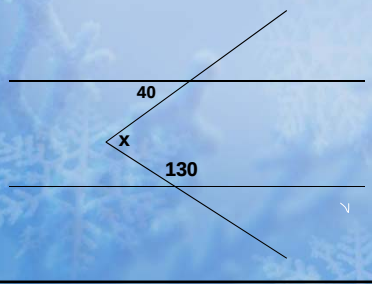
$15x+12=180$

$15x=168$

$x=11.2$

The lines are parallel. Find x.

A) 40 B) 50 C) 90 D) 130



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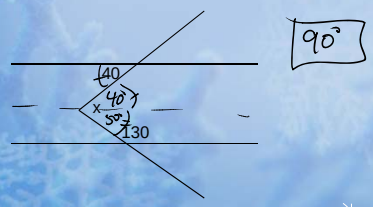
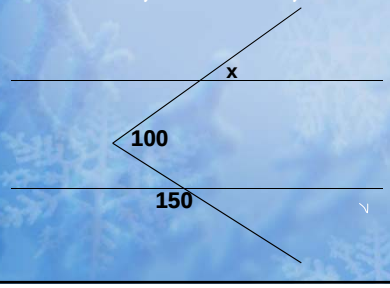


The lines are parallel. Find x.

A) 70 B) 80 C) 100 D) 150



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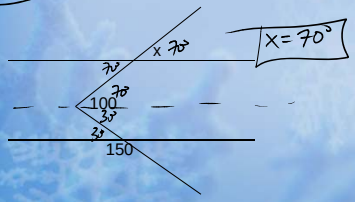
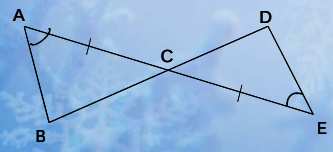


Complete the Statement:
Triangle ABC is Congruent to Triangle _____
A) CDE B) DEC C) EDC D) Not Congruent



Complete the Statement:
Triangle ABC is Congruent to Triangle EDC
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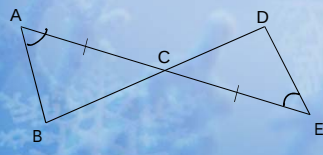
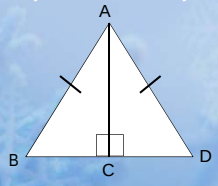


What postulate(s) proves Triangle ABC is congruent to Triangle ADC? Select All that Apply.

A) ASA B) AAS C) HL D) Not Congruent



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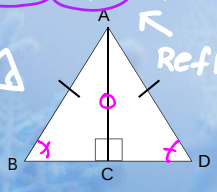
If ∠ → ∠

Reflexive Prop.



Triangle ABC is congruent to Triangle DEF

AB = 10x

BC = 12

DF = 35

DE = 70

Find x.

A) x = 1.2 B) x = 7 C) x = 3.5 D) x = 18

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AB = 10x

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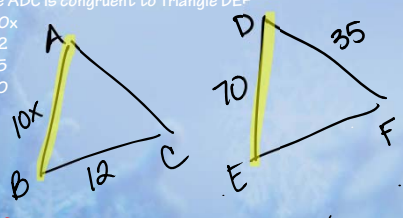
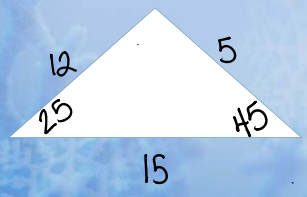
Find x



10x = 70

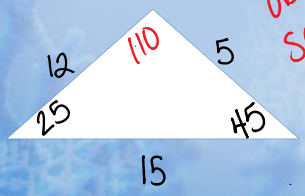
x = 7

Classify the Triangle by angles and sides:



Classify the Triangle by angles and sides:

obtuse scalene



Given: ABCD is a rhombus

m ∠A = x + 62

m ∠B = 3x + 2

Find: ∠D

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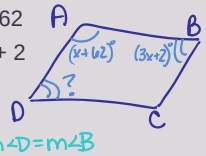
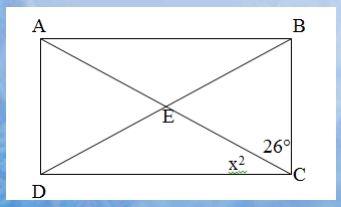


$m\angle A + m\angle B = 180°$
$x+62+3x+2=180$
$4x+64=180$
$4x=116$
$x=29$

$m\angle D = m\angle B$
$m\angle D = 3x+2$
$m\angle D = 3(29)+2$
$m\angle D = 89°$

What is the value of x if ABCD is a rectangle?



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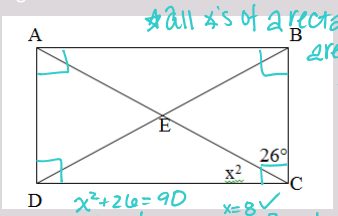
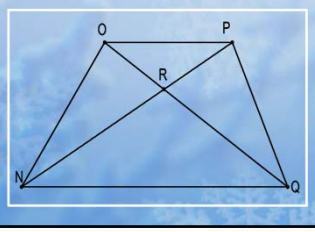


*all ∠'s of a rectangle are Right ∠s

$x^2+26=90$
$x^2=64$
$x=\pm 8$

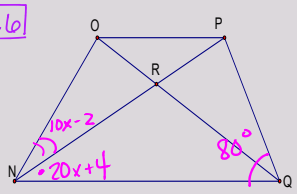
$x=8$ ✓ $(8)^2=64$
$x=-8$ ✓ $(-8)^2=64$

NOPQ is an isosceles trapezoid.
∠PQN = 80
∠ONR = 10x – 2
∠PNQ = 20x + 4
Find: x

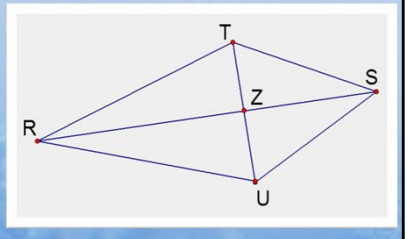


NOPQ is an isosceles trapezoid.
∠PQN = 80
∠ONR = 10x – 2
∠PNQ = 20x + 4
Find: x = 2.6

Lower base ∠s ≅
$10x-2+20x+4=80$
$30x+2=80$
$30x=78$
$x=2.6$



Given: RTSU is a kite with ST = SU
RT = 4x + 5
RU = 12x - 3
TU = 10x – 1
Find: TZ



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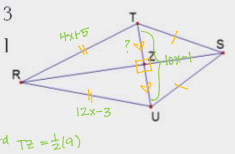

1st $4x+5 = 12x-3$

$8 = 8x$

$1 = x$

so $x = 1$

2nd $TU = 10(1) - 1 = 9$

3rd $TZ = \frac{1}{2}(9)$

$TZ = 4.5$