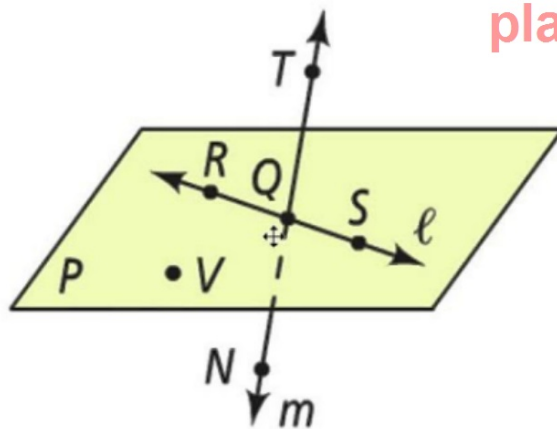


1.) Name this plane two different ways.
 Where do lines RS and TN intersect?
 Is line TN coplanar with line ℓ ?

Plane P or
 Plane RSV

Point Q

No, because TN
 goes through the
 plane it's not on it.



No, they are not
 on the same line!

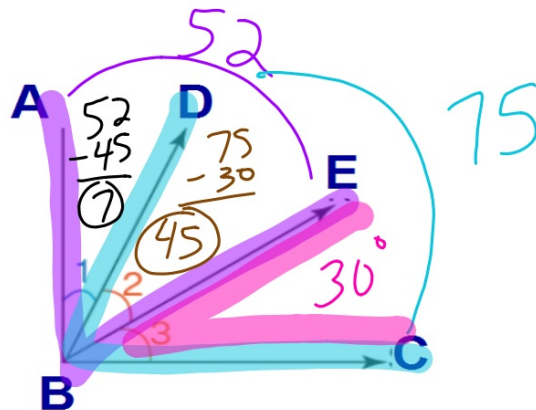
Are Points T Q and V collinear?

Name Three points that are collinear.

R Q S

T Q N

2.)



Find the measure of angle **ABD** if you know
 that $m\angle ABE = 52$, $m\angle DBC = 75$, $m\angle EBC = 30$
 ($\angle 3$)

Point A is the Endpoint
and
Point B is the Midpoint.
Find the missing
Endpoint C.

*Also use the midpoint
formua to prove!

$$\frac{x_1 + x_2}{2}, \quad \frac{y_1 + y_2}{2}$$

$$\frac{3 + x}{2} = 6$$

$$\frac{5 + y}{2} = 10$$

$$\left(\frac{3 + x}{2} = 6 \right)^2$$

$$\left(\frac{5 + y}{2} = 10 \right)^2$$

$$\begin{array}{r} 3 + x = 12 \\ -3 \quad -3 \\ \hline \end{array}$$

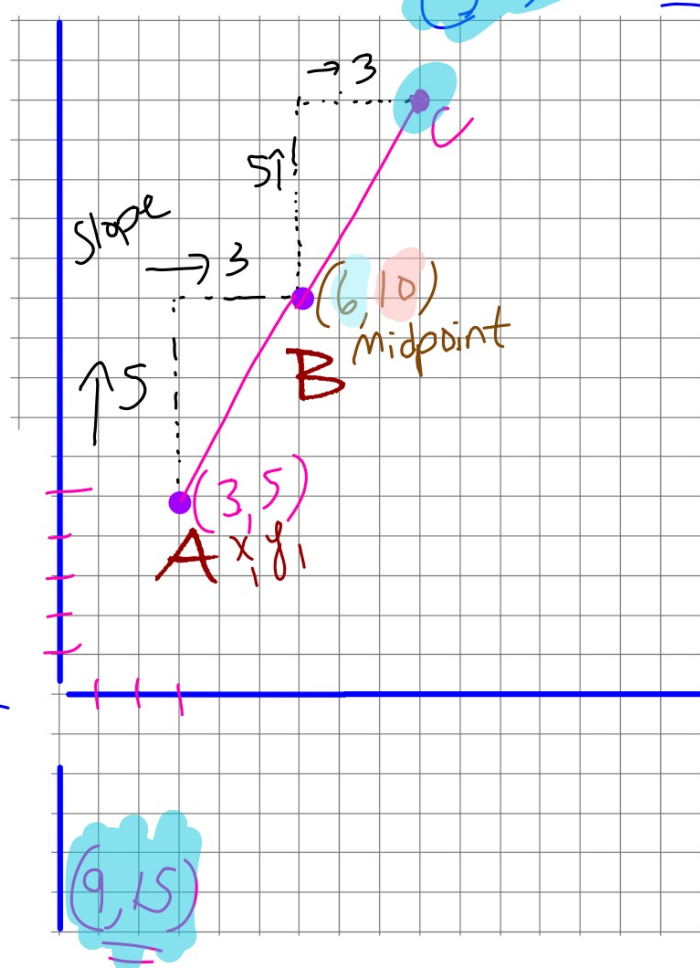
$$\begin{array}{r} 5 + y = 20 \\ -5 \quad -5 \\ \hline \end{array}$$

$$\boxed{x = 9}$$

$$\boxed{y = 15}$$

3.)

(9, 15) answer



True or False:



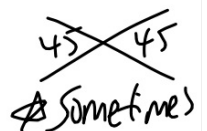
All Vertical Angles are Congruent. True $\angle 1 \cong \angle 3$

All Vertical Angles are Adjacent. False $\angle 1 \ncong \angle 2$

All Vertical Angles are Complementary. False $\frac{100}{100}$



90°



All Supplementary angles are Congruent. False $\frac{100}{80}$ Sometimes

All Supplementary angles are a Linear Pair. False $\frac{100}{160}$

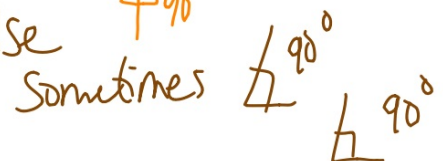
All Supplementary angles are Adjacent. False Sometimes



All perpendicular Angles are right angles. True 90°

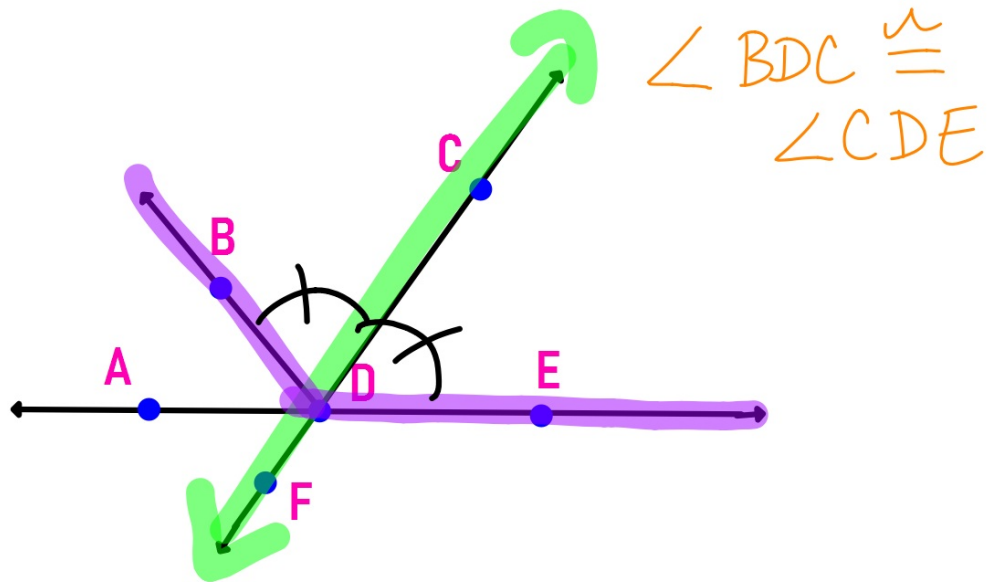
All perpendicular angles are congruent. True 90°

All perpendicular angles are Adjacent. False



4.)

If FC bisects $\angle BDE$ which angles are congruent?



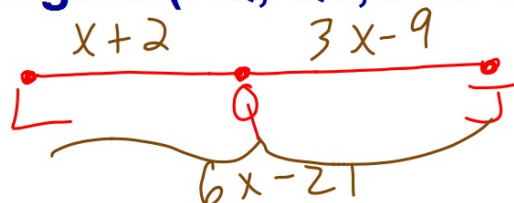
5.) Draw a line segment where Q is between Points L and J on a line segment where all points are collinear.

Label the following lengths on your line segment:

$$LQ = x+2, \quad QJ = 3x-9, \quad LJ = 6x-21$$

Solve for all the lengths (LQ, QJ, and LJ)

$$\begin{aligned}
 x+2+3x-9 &= 6x-21 \\
 4x-7 &= 6x-21 \\
 -4x &\quad -4x \\
 \hline
 -7 &= 2x-21 \\
 +21 &\quad +21 \\
 \hline
 14 &= 2x \\
 7 &= x
 \end{aligned}$$



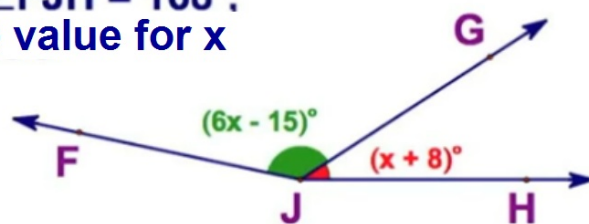
$$\begin{aligned}
 LQ &= 7+2 = 9 \\
 QJ &= 3(7)-9 = 12 \\
 LJ &= 6(7)-21 = 21
 \end{aligned}$$

6.) Given: $4(5x + 7) - 3x = 12x - 27$

Prove: $x = -11$

Statements	Reasons
1. $4(5x + 7) - 3x = 12x - 27$	1. Given
2. $20x + 28 - 3x = 12x - 27$	2. Distributive
3. $17x + 28 = 12x - 27$	3. Combine like terms
4. $5x + 28 = -27$	4. Subtraction Property
5. $5x = -55$	5. Subtraction
6. $x = -11$	6. Division

- 7.) Given $m\angle FJH = 168^\circ$.
Prove the value for x



Statements	Reasons
$m\angle FJH = 168$	Given
$m\angle FJG + m\angle GJH = m\angle FJH$	Angle Addition
$(6x - 15) + (x + 8) = 168$	Substitution
$7x - 7 = 168$	Combine Like Terms
$7x = 175$	Addition
$x = 25$	Division

8.

Hypothesis

If two points are on the same line, then they are collinear.

Conclusion

<u>Converse :</u>	If two points are collinear, then they are on the same line. <i>True.</i>
<u>Inverse :</u>	If two points are not on the same line, then they are not collinear. <i>True.</i>
<u>Contrapositive :</u>	If two points are not collinear, then they do not lie on the same line. <i>True.</i>



Which is the hypothesis and the conclusion?

Vocabulary from Modules 1-3 & all Notes (content library from Teams - Class Notebook)

Valid (true)

Counterexample (non-example)

Inverse (opposite)

Hypothesis (beginning)

Conclusion (ending)

linear pair (line - 180 degrees -supplementary)

adjacent (angles next to each other *any degrees)

right angles/perpendicular (90 degrees)

vertical angles

collinear (same line)

coplaner (same plane)

congruent (equal)

bisector (cuts in half - congruent parts of a line

segment/angle) *Midpoint/Angle Bisector

Know your properties!

***STUDY FROM CLASS WEBSITE, TEAMS -**

CLASS NOTEBOOK VOCAB/NOTES CONTENT LIBRARY