

ADVANCED GEOMETRY CHAPTER 3 REVIEW

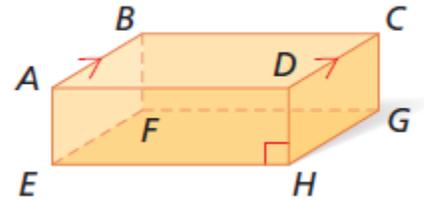
BE SURE TO:

*Read the directions carefully and answer what the question is asking

*If you get stuck, look back to the section in your notes the problem comes from. This is probably a hint that you should spend more time studying this section.

1. Name the following:

- a. A segment parallel to AB
- b. A segment perpendicular to DH
- c. A line skew to AE that goes through point B
- d. A plane parallel to Plane ABC



Write the equation of the line in slope-intersect form passing through the given points:

2) $(-2, -3)$ and $(-4, 3)$

3) $(-5, -5)$ and $(-3, -1)$

Write the equation of the line based on the information provided below:

4) parallel to $y = -\frac{7}{3}x + 3$; through $(-3, -1)$

5) perp. to $y = \frac{1}{2}x + 2$; through $(-3, -7)$

6) parallel to $y = \frac{2}{5}x + 3$; through $(3,7)$

7) perp. to $y = -3x - 5$; through $(5, -2)$

Write the equation of the perpendicular bisector of segment AB:

8) $A(-2, -3)$, $B(-4, 3)$

9) $A(5, 3)$, $B(-7, 7)$

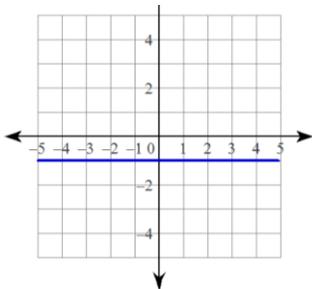
Find the coordinates of point Q along the directed line segment LM so that LQ to QM is the given ratio.

10) $L(-1, -2)$, $M(3,6)$; ratio 5 to 3

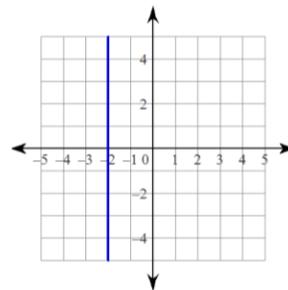
11) $L(2,7)$, $M(-1,1)$; ratio 2 to 1

Write the equation of each line.

12.



13.

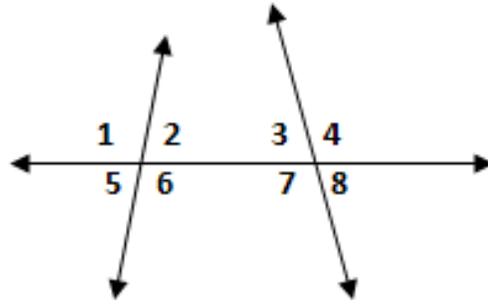


14. A vertical line through $(2, -5)$

15. A horizontal line through $(4, -2)$

16-22. Match the correct angle pair with the given set of angles.

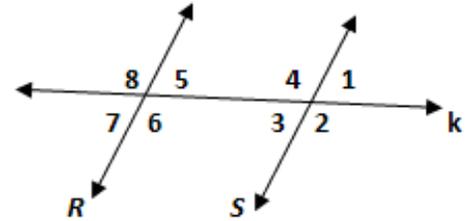
- A. Alternate Interior
- B. Consecutive Interior
- C. Alternate Exterior
- D. Corresponding
- E. Vertical
- F. Linear Pair
- G. No Relationship



- 16. $\angle 1, \angle 8$ _____
- 17. $\angle 3, \angle 6$ _____
- 18. $\angle 3, \angle 7$ _____
- 19. $\angle 1, \angle 6$ _____
- 20. $\angle 5, \angle 8$ _____
- 21. $\angle 2, \angle 4$ _____
- 22. $\angle 6, \angle 7$ _____

Use the figure to the right to answer #23-25

23. If R and S are parallel lines and $\angle 1 = 4x - 3$ and $\angle 7 = 3x + 4$, find the measure of $\angle 2$.

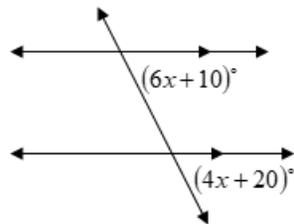


24. If R and S are parallel lines and $\angle 3 = 2x + 15$ and $\angle 5 = 5x + 3$, find the measure of $\angle 2$.

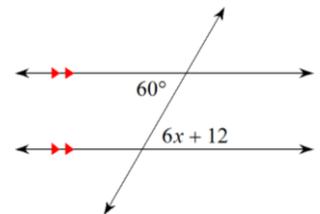
25. If R and S are parallel lines and $\angle 5 = 3x + 30$ and $\angle 4 = 5x + 22$, find the measure of $\angle 2$.

Find the value of all missing variables.

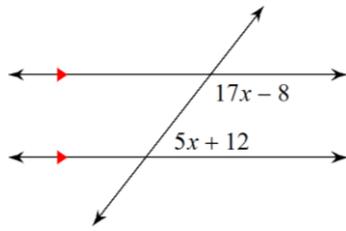
26.



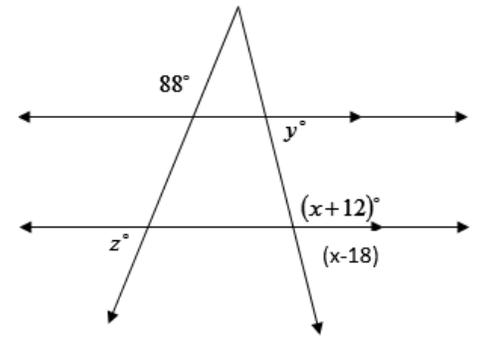
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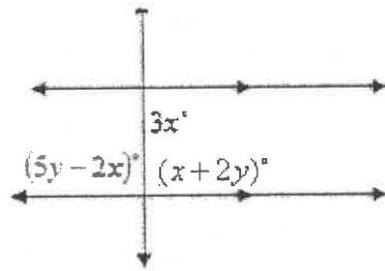
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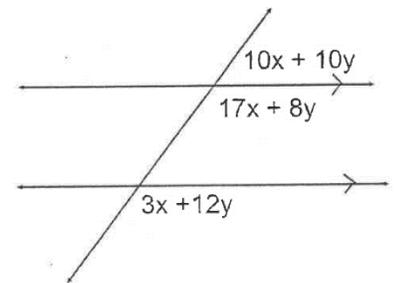
29.



30.



31.



32. Find the distance from $P(4, 8)$ to the line $6 = y + 2x$.

33. Find the distance from $P(-2, 1)$ to $y = \frac{1}{4}x - 3$.