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Unit 1 Review Coordinate Geometry

1. What is the midpoint between (-2, 5) and (4, 8)?

2. What is the distance between the points (-6, 5) and (1,1)?

3. One endpoint of a segment is (20, 20). The midpoint of the segment is (-2, 4). What is the second endpoint of this segment?

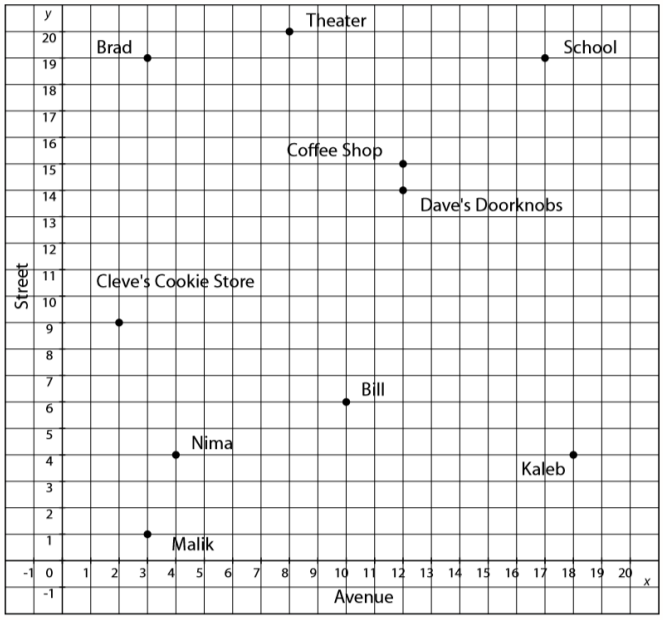
4. What is the point that is 2:1 the distance from the endpoint (-3, 8) of the segment with endpoints (-3, 8) and (9, -7)?

5. Luis works at a theater on 8th Avenue and 20th Street. Kaleb lives at the corner of 18th Avenue and 4th Street. What is the intersection that is midway between them?

6. Cleve's Cookie Store is located at the corner of 2nd Avenue and 9th Street. Dave's Doorknobs is located at the corner of 12th Avenue and 14th Street. Located 1/5 of the distance from Cleve's Cookie Store is the post office. Where is the post office?

8. Malik and Brad both live on 3rd Avenue. Malik lives at the corner of 1st Street, and Brad lives at the corner of 19th Street. 2/3 the distance from Malik's apartment to Brad's apartment is a market. Where is the market?

Use the table to answer questions 5-8.



7. What is the distance between Bill and Kaleb?

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9. Determine which of the lines, if any, are parallel. Explain.

Line a passes through (-2,5) and (2,1)

Line b passes through (-4,3) and (3,4)

Line c passes through (-3,4) and (2,-6)

10. Determine which of the lines, if any, are perpendicular. Explain.

Lina a passes through (-2,-4) and (-1,-1)

Line b passes through (-1,-4) and (1,2)

Line c passes through (2,3) and (4,2)

11. Determine which of the lines, if any, are parallel. Explain.

Lina a: $5y - x = 4$

Line b: $5y = x + 7$

Line c: $5y - 2x = 5$

12. Determine which of the lines, if any, are perpendicular. Explain.

Lina a: $5y - 2x = 1$

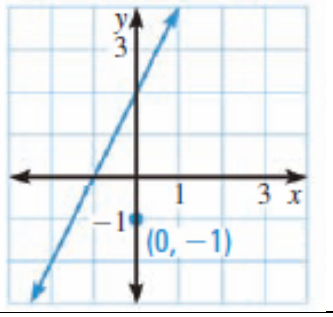
Line b: $y = \frac{5}{2}x - 1$

Line c: $y = \frac{2}{5}x + 3$

13. Write an equation of the line that passes through the given point and is parallel to the given line.

$(1, -2); y = -2x + 1$

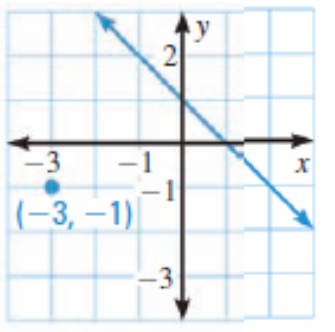
14. Write in slope-intercept form the equation of the line that is parallel to the line in the graph and passes through the given point.



15. Write an equation of the line that passes through the given point and is perpendicular to the given line.

$(-2,2); y = \frac{2}{3}x + 2$

16. Write in slope-intercept form the equation of the line that is perpendicular to the line in the graph and passes through the given point.



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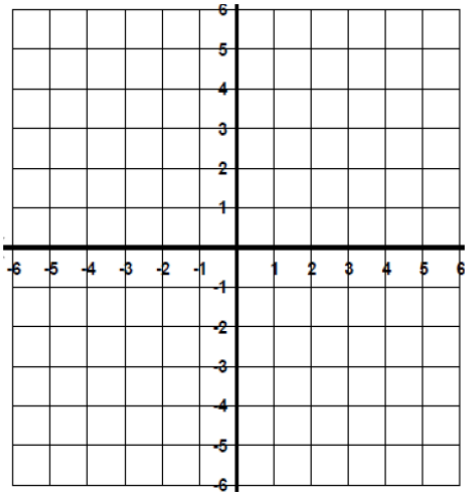
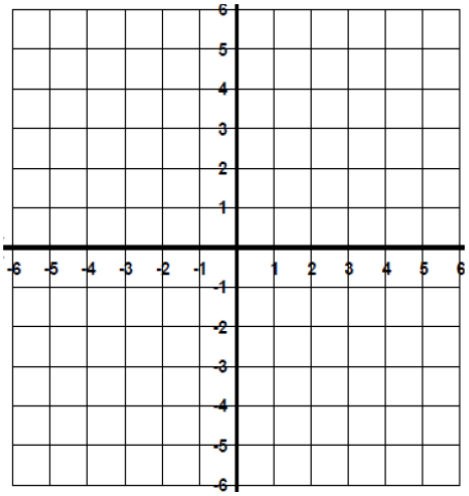
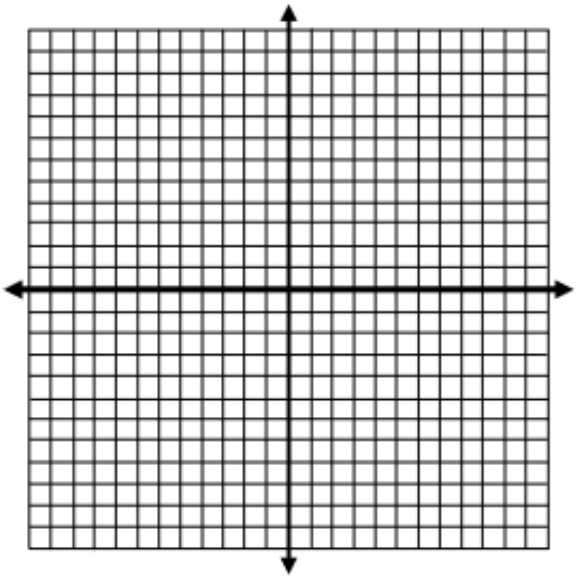
17. Find the area of the polygon with the given vertices.
N(−2, 1), P(3, 1), Q(3, −1), R(−2, −1)



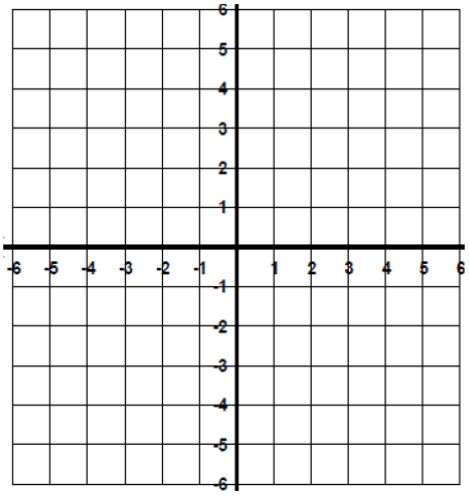
18. Find the perimeter of the polygon with the given vertices.
X(−1, 3), Y(3, 0), Z(−1, −2)



19. What is the area of the rectangle ABCD with vertices: A(-5, 7), B(-4, 10), C(5, 7), and D(4, 4)?



20. Write an expression that represents the perimeter of the square with the given vertices: A(2,-3), B(3,2), C(-2,3), and D(-3,-2)



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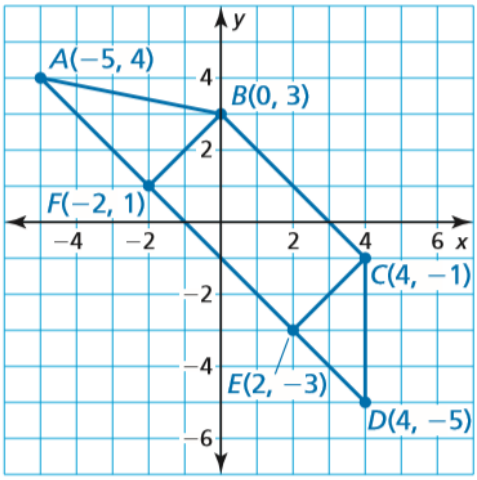
21.



a) Find the perimeter of △CDE.

b) Find the perimeter of rectangle BCEF.

c) Find the perimeter of △ABF.

d) Find the perimeter of quadrilateral ABCD.

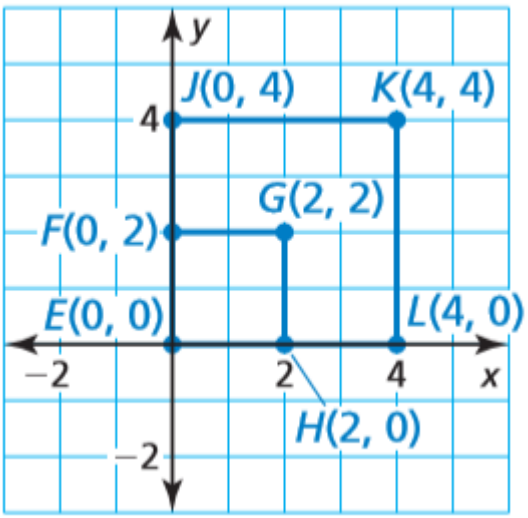
e) Find the area of △CDE.

f) Find the area of rectangle BCEF.

g) Find the area of △ABF.

h) Find the area of quadrilateral ABCD.

22.



a. Find the areas of square EFGH and square EJKL. What happens to the area when the perimeter of square EFGH is doubled?

b. Is this true for every square? Explain.