

Review package for TEST # 3

Write each one of the following formulas:

1. Midpoint Formula Slope Formula Length Formula

2. For the line segment with endpoints (3, -7) and (-6, -13) determine each one of the following:

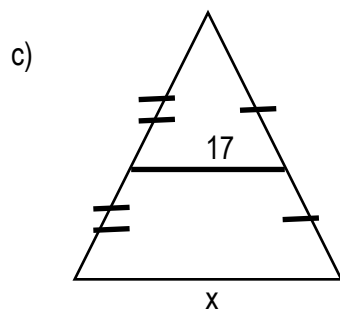
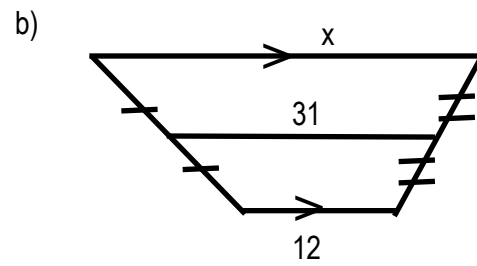
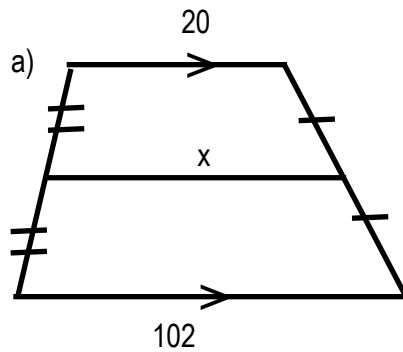
- a) Midpoint b) Slope c) Length

3. Having two items at your disposal; the length of a line formula and the slope formula, and your knowledge of parallel and perpendicular slopes, provide what you would do to prove (verify) that each of the following geometric shapes are indeed those shapes.

- a) rhombus
b) parallelogram
c) isosceles triangle
d) trapezoid
e) scalene right-angle triangle
f) rectangle

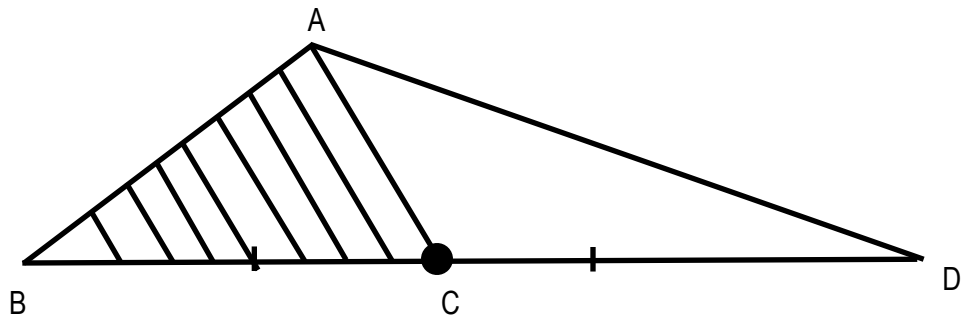
4. Write an equation for the altitude of vertex A in the triangle ABC, where the points are A (10, 2), B (4, 14) and C (12, -2)

5. Determine the length of x

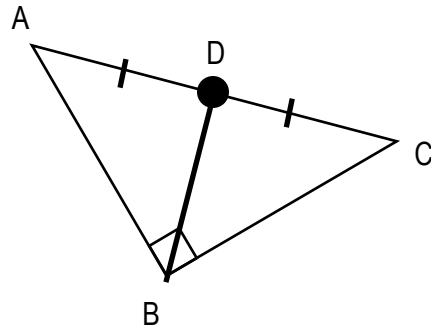


6. Verify that points A $(-2, 4)$, B $(1, -3)$, and C $(5, 7)$ are on the same circle with centre $(3, 2)$.
7. Explain how you would determine the centroid of the following points: A $(0, 8)$, B $(6, -2)$, and C $(-7, 15)$
8. How do you determine the circumcentre of a triangle?

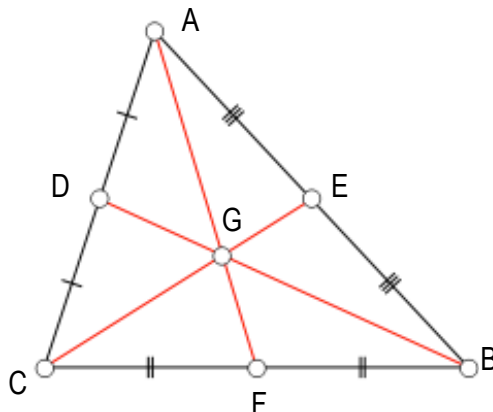
9. If $\triangle ABC$ has an area of 47 cm^2 , the area of $\triangle ACD$ is _____ cm^2 and the area of $\triangle ABD$ is _____ cm^2



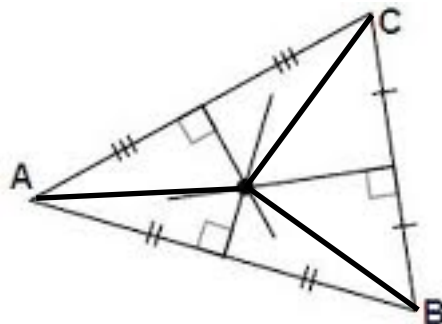
10. If line AD is 28 cm, the length of line AC is _____ cm and the length of line DB is _____ cm.



11. If line DG is 18 m, line AG is 30 m, and line CG is 12 m, the length of line GE is _____ m, the length of line GF is _____ m, and the length of line BG is _____ m.

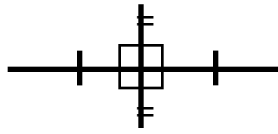


12. If the length of line CB is 38 m and the length of GC is 24 m, the length of DC is _____ m, the length of line GB is _____ m, and the length of line AG is _____ m.

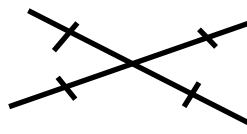


13. Identify the specific geometric shape that each of the following diagonals belongs to:

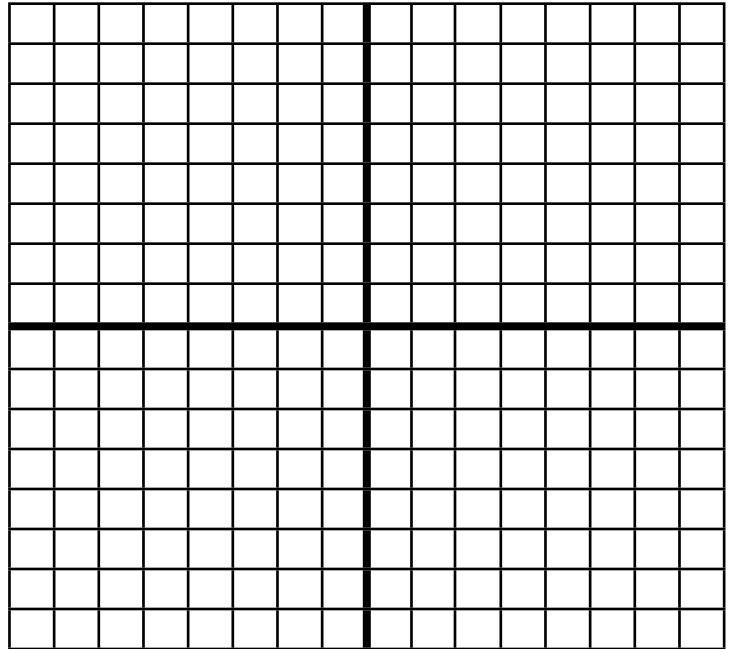
a)



b)



14. Verify that points A (, 6), B (4, 1) and C (-1, -1) are the vertices of an isosceles triangle and verify that it is also a right angle triangle.



15. Define each one of the following terms and provide an example or a diagram supporting your definition:

a) Similar triangle

b) Collinear

c) Congruent

d) Orthocentre

e) Chord

f) Kite