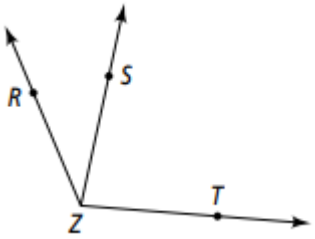
Name: _____

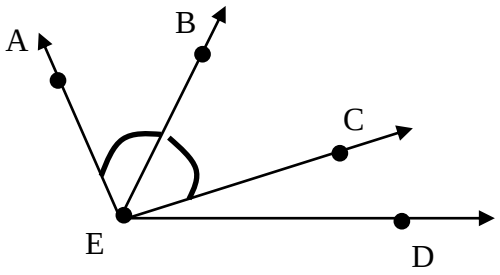
Math 1 Test Chapter 6, Practice Test

1. Given GH = 3x - 2, HI = 7x - 4, and GI = 8x + 10, find x

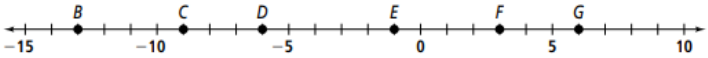
2. Given m∠ RZS = 25° and m∠ SZT = 85° Find m∠ RZT



3. Given m∠ CED = 20° , m∠ ABE = m∠ BEC and m∠ AED = 140°, Find m∠ BEC



4. Find the distance between each pair of points using the number line below:



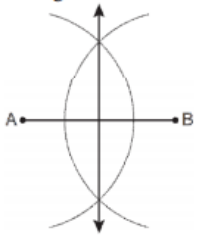
a. BC = _____

b. DF = _____

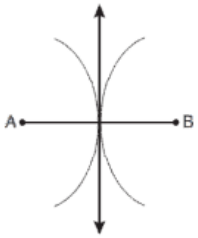
c. GF = _____

5. Which diagram shows the construction of the perpendicular bisector of $\overline{AB}$?

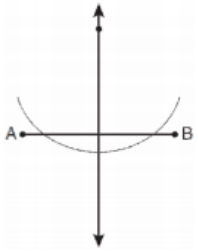
1)



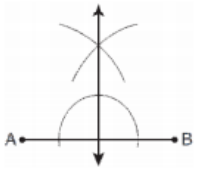
3)



2)



4)



6. You are asked to construct a segment congruent to $\overline{AB}$. As a first step, you draw a ray. Which of the following, if true of the ray, would be most helpful?

(A) The ray is drawn on the paper shorter than $\overline{AB}$.

(B) The ray is drawn on the paper longer than $\overline{AB}$.

(C) The ray is drawn parallel to $\overline{AB}$.

(D) The ray is drawn perpendicular to $\overline{AB}$.

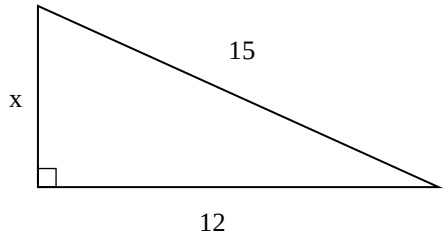
7. Find the midpoint between the endpoints

(1, 8) and (9, 4)

8. Find the midpoint between the endpoints

(-7, -5) and (3, -4)

9. Find the value of x in the right triangle. Show your work.



10. Find the distance between the points

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

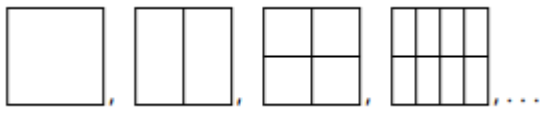
11. Find the distance between the points

(8, -2) and (3, 2)

12. Use inductive reasoning to find the next two numbers in the pattern:

22, 20, 17, 13, ____, ____

13. Use inductive reasoning to draw the next two shapes in the pattern:



14. What conjecture can you make about the product (multiply) of two negative numbers?

Give two examples to support your conjecture.

15. Give a counterexample to show the conjecture is false.

Multiplying any number by 2 results in a larger number.

Counterexample: _____

16. Give a counterexample to show the conjecture is false.

All 50 states border at least one other state.

Counterexample: _____

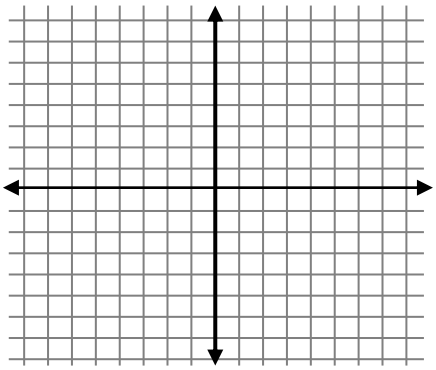
Review

17. Solve for x

$3^{x+2} = 81^{x-1}$

18. Sketch a graph of $f(x) = 6\left(\frac{1}{2}\right)^x$

showing the y-intercept, one other point, and any asymptotes



19. Set up an exponential equation in the form $y = a(b)^x$ for each situation:

a. Initial value = 250 with a decay rate of 13%

_____

b. Initial value = 4000 with a growth rate of 5%

_____

20. Find an explicit and recursive formula for the geometric sequence: 2, 12, 72, 432, . . .

Explicit: $a_n =$ _____

Recursive: $a_1 =$ _____

$a_n =$ _____