Geometry

1.3 Use Midpoint and Distance Formulas

# Midpoint

A

B

M

What is it like?

Very middle of the segment

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Point that divides the segment into two congruent segments.

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What are some examples?

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

M is the midpoint of AB

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

AM = MB

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

midpoint

Segment Bisector

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is something that intersects a segment at its \_\_\_\_\_\_\_\_\_\_\_\_\_.

bisects at Q. If PQ = 22.6, find PN.

M

N

Q

P

O

PQ = ½ PN

22.6 = ½ PN

PN = 45.2

R

5x - 2

3x + 8

T

S

Point S is the midpoint of . Find ST.

5x-2 = 3x+8

2x-2 = 8

2x = 10

x = 5

ST = 3(5) + 8 = 23

## Midpoint Formula

Midpoint = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Find the midpoint of G(7, -2) and H(-5, -6)

The midpoint of is M(5, 8). One endpoint is A(2, -3). Find the coordinates of endpoint B.

x-coords:

y-coords:

(8, 19)

## Distance Formula

d = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is PQ if P(2, 5) and Q(-4, 8)?

Assignment: 19 #2, 4, 6, 10-20 even, 24, 26, 28, 32, 36, 38, 42, 44, 48, 54-64 all = 29 total

Extra Credit: 22#2, 8