Name _____ Period _____ Date _____
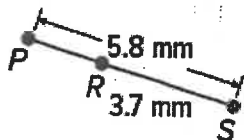
Practice Lesson 1.2 – Line Segments

Examples 1 and 2

Find the measure of each segment.

1. $\overline{PR}$

P —5.8 mm
R
3.7 mm
S

2. $\overline{EF}$

2.8 in.
F
2.5 in.
G
E

7. $\overline{NQ}$

1 in. $1\frac{1}{4}$ in.
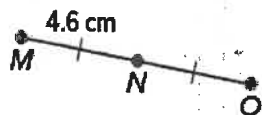Q   P   N
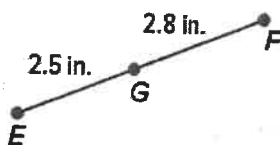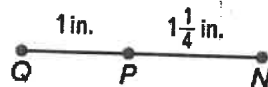
Find the value of the variable and YZ if Y is between X and Z.

10. $XY = 11$, $YZ = 4c$, $XZ = 83$

23. $XY = 2x + 1$, $YZ = 6x$, and $XZ = 81$
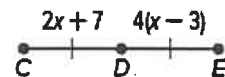
Find the measure of each segment.
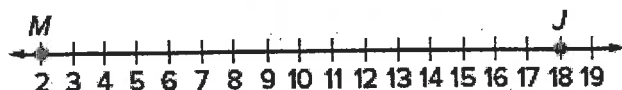
28. $\overline{MO}$

4.6 cm
M
N
O

29. $\overline{WY}$

8.8 mm
W   Y   X
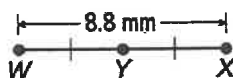
32. $\overline{DE}$

$2x + 7$ $4(x - 3)$
C   D   E

Practice Lesson 1.3 – Locating Points using Ratios

Example 1

Refer to the number line.

M ——————————————— J ——
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

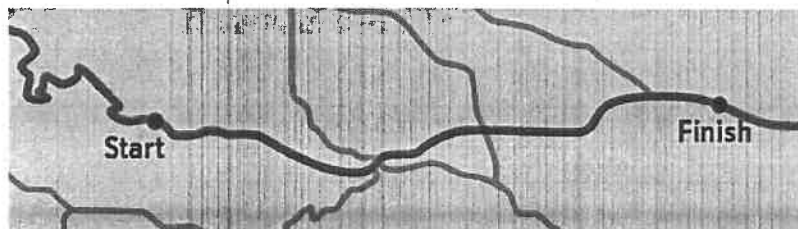1. Find the coordinate of point X such that the ratio of MX to XJ is 3:1.

Example 2

7. **HIKING** A hiking trail is 24 miles from start to finish. There are two rest areas located along the trail.

Start   Finish

The first rest area is located such that the ratio of the distance from the start of the trail to the rest area and the distance from the rest area to the end of the trail is 2:9. To the nearest hundredth of a mile, how far is the first rest area from the starting point of the trail?

Example 4

15. **CITY PLANNING** The United States Capitol is located at (2, −4) on a coordinate grid. The White House is located at (−10, 16) on the same coordinate grid. Find two points on the straight line between the United States Capitol and the White House such that the ratio is 1:3.

Refer to the coordinate grid.

17. Find Y on $\overline{MN}$ such that the ratio of MY to YN is 1:3.