Geometry 1 - Mr. C. - All work on looseleaf. Name_____

Q1P4 Midpoint and Distance Formulas

Date_____ Period____

Find the midpoint of the line segment with the given endpoints.

1) $(-5, -5)$, $(10, -3)$

2) $(1, 9)$, $(1, 5)$

3) $(8, -6)$, $(1, 4)$

4) $(-2, -9)$, $(-5, 8)$

5) $(-9, 7)$, $(-4, 8)$

6) $(-10, -10)$, $(-6, -6)$

7) $(4, -3)$, $(-5, -6)$

8) $(9, 10)$, $(-10, -2)$

9) $\left(3\frac{1}{3}, \frac{1}{8}\right)$, $\left(0, 4\frac{1}{2}\right)$

10) $\left(\frac{1}{5}, \frac{5}{3}\right)$, $\left(\frac{1}{3}, -\frac{5}{3}\right)$

11) $\left(1, -\frac{3}{2}\right)$, $\left(1\frac{1}{7}, 3\frac{2}{3}\right)$

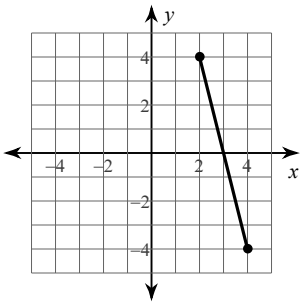
12) $\left(-\frac{4}{3}, -1\frac{1}{2}\right)$, $\left(\frac{1}{6}, 4\frac{1}{3}\right)$

13) $\left(3\frac{1}{3}, 5\frac{7}{8}\right)$, $\left(-2, -9\frac{3}{8}\right)$

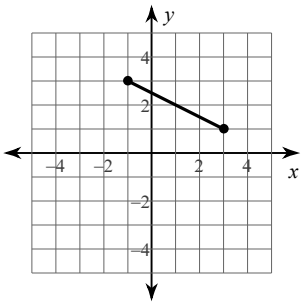
14) $(9, -1)$, $\left(\frac{2}{3}, 3\frac{1}{3}\right)$

Find the midpoint of each line segment.

15)



16)



Find the other endpoint of the line segment with the given endpoint and midpoint. Tip: use Algebra!

17) Endpoint: $(-1, 2)$, midpoint: $(0, -4)$

18) Endpoint: $(5, 8)$, midpoint: $(-1, 3)$

19) Endpoint: $(-8, 9)$, midpoint: $(0, -4)$

20) Endpoint: $(2, -10)$, midpoint: $(6, -7)$

21) Endpoint: $(3, 7)$, midpoint: $(-5, -1)$

22) Endpoint: $(10, 0)$, midpoint: $(7, 7)$

23) Endpoint: $(7, 3)$, midpoint: $(1, 9)$

24) Endpoint: $(-5, 5)$, midpoint: $(7, 6)$

Find the distance between each pair of points.

25) $(-8, -1)$, $(4, 4)$

26) $(7, -2)$, $(7, 0)$

27) $(-4, -4)$, $(0, -6)$

28) $(3, 5)$, $(-2, -1)$

29) $(-7, 5)$, $(0, -2)$

30) $(-8, 1)$, $(-7, -5)$

31) $(6, -4)$, $(5, 4)$

32) $(5, 5)$, $(1, 2)$

33) $(-4, -8)$, $(5, -3)$

34) $(4, 2)$, $(4, -2)$

35) $(2, -4)$, $(3, -6)$

36) $(-2, 1)$, $(-5, -6)$

37) $\left(-2\frac{1}{2}, -1\frac{1}{2}\right)$, $\left(2\frac{1}{2}, -\frac{1}{2}\right)$

38) $\left(-1\frac{1}{4}, -\frac{1}{4}\right)$, $\left(-1\frac{3}{4}, 2\frac{1}{2}\right)$

39) $\left(-\frac{5}{3}, 0\right)$, $\left(-1, -\frac{5}{3}\right)$

40) $\left(\frac{1}{3}, -4\right)$, $\left(-\frac{4}{3}, -1\frac{1}{2}\right)$

41) $(0, 2)$, $(-1, -2)$

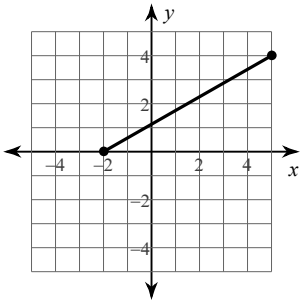
42) $\left(-\frac{2}{3}, -2\frac{1}{2}\right)$, $\left(-2\frac{3}{4}, -1\frac{2}{3}\right)$

Find the distance between each pair of points. Round your answer to the nearest tenth, if necessary.

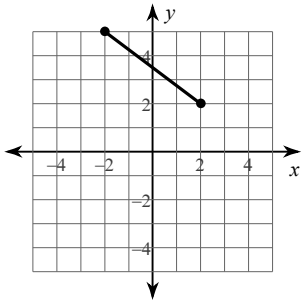
43) $(0.8, -3.6)$, $(-0.1, 1.2)$

44) $(0.4, -7.4)$, $(0.5, 2.2)$

45)



46)



Answers to Q1P4 Midpoint and Distance Formulas (ID: 1)

1) $\left(2\frac{1}{2}, -4\right)$
2) $(1, 7)$
3) $\left(4\frac{1}{2}, -1\right)$
4) $\left(-3\frac{1}{2}, -\frac{1}{2}\right)$
5) $\left(-6\frac{1}{2}, 7\frac{1}{2}\right)$
6) $(-8, -8)$
7) $\left(-\frac{1}{2}, -4\frac{1}{2}\right)$
8) $\left(-\frac{1}{2}, 4\right)$
9) $\left(1\frac{2}{3}, 2\frac{5}{16}\right)$
10) $\left(\frac{4}{15}, 0\right)$
11) $\left(1\frac{1}{14}, 1\frac{1}{12}\right)$
12) $\left(-\frac{7}{12}, 1\frac{5}{12}\right)$
13) $\left(\frac{2}{3}, -1\frac{3}{4}\right)$
14) $\left(4\frac{5}{6}, 1\frac{1}{6}\right)$
15) $(3, 0)$
16) $(1, 2)$
17) $(1, -10)$
18) $(-7, -2)$
19) $(8, -17)$
20) $(10, -4)$
21) $(-13, -9)$
22) $(4, 14)$
23) $(-5, 15)$
24) $(19, 7)$
25) 13
26) 2
27) $2\sqrt{5}$
28) $\sqrt{61}$
29) $7\sqrt{2}$
30) $\sqrt{37}$
31) $\sqrt{65}$
32) 5
33) $\sqrt{106}$
34) 4
35) $\sqrt{5}$
36) $\sqrt{58}$
37) $\sqrt{26}$
38) $\frac{5\sqrt{5}}{4}$
39) $\frac{\sqrt{29}}{3}$
40) $\frac{5\sqrt{13}}{6}$
41) $\sqrt{17}$
42) $\frac{5\sqrt{29}}{12}$
43) 4.9
44) 9.6
45) 8.1
46) 5