Name _____ Class _____ Date _____

Use after Section 9.6

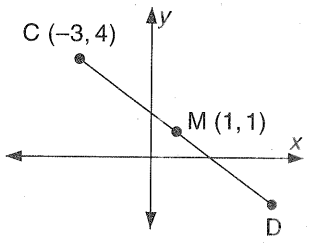
Extra Practice

Problems and Applications

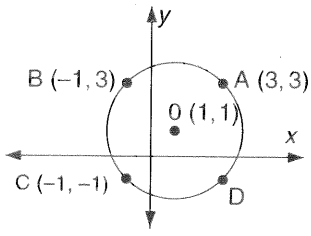
1 Find the distance between each pair of points.
a (–3, 2) and (4, 3)
b (5, –2) and (5, –5)
c (4, 0) and (0, –3)
d (8, –7) and (2, –7)

2 Find the midpoint of the segment joining each pair of points.
a (10, –8) and (13, 6)
b (8.3, 8.3) and (7.7, 7.7)
c (–5, 6) and (2, 4)
d (–1.5, 2.0) and (2.5, –0.5)

3 M is the midpoint of $\overline{CD}$.
Find the coordinates of D.

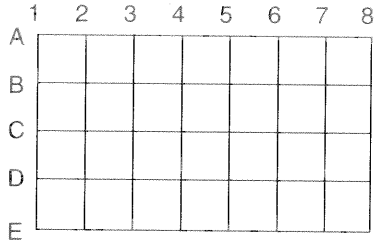


4 For the given circle, find
a OA
b OB
c OC
d OD

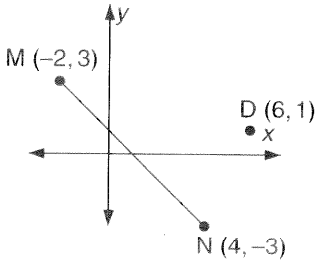


5 Given points A (7, –3) and B (–4, 1), find
a The length of $\overline{AB}$
b The midpoint of $\overline{AB}$
c The distance from B to the midpoint

6 The side length of each small square represents 1 centimeter. Find, to the nearest tenth of a centimeter, the distance between points
a B3 and B8
b A5 and C7
c D4 and E2
d B6 and A 1



7 Find the distance from D to the midpoint of $\overline{MN}$.



1a _____
b _____
c _____
d _____
2a _____
b _____
c _____
d _____
3 _____
4a _____
b _____
c _____
d _____
5a _____
b _____
c _____
6a _____
b _____
c _____
d _____
7 _____

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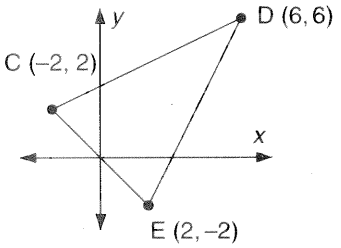
8 Find CD, CE, and DE. What kind of triangle is $\triangle CDE$?



8 _____

9 Locate the points A (–6, 2), B (4, 2), C (2, –3), and D (–4, –3) on a coordinate system.

9a _____

b _____

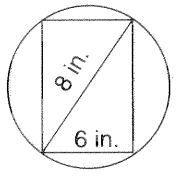
c _____

a Draw and name the quadrilateral having these four points as vertices.
b Find the midpoint of $\overline{AD}$.
c Find the midpoint of $\overline{BC}$.
d Find the lengths of $\overline{AD}$ and $\overline{BC}$.
e Find the lengths of $\overline{AB}$ and $\overline{DC}$.

d _____

e _____

10 Find the area of the shaded region.



10 _____

Spiral Learning

11 Vanessa bought one pair of jeans at \$32. 99, two tops at \$22. 49 each, and a pair of socks at \$2. 90. There is a 6% sales tax. Find the total bill.

11 _____

12a _____

12 Solve each equation, and simplify each expression.
a $11x(3x - 4) = 0$ b $13x - 15 - 5(2x - 5)$

b _____

13 Evaluate each expression.

13a _____

a $\sqrt{5^2} - \sqrt{3^2} + \sqrt{13^2 - 5^2}$ b $\frac{29 - 8}{-3} \cdot (2^2 + 1) + 7$

b _____

14 If $(x, y) = (5, -4)$, $a = \frac{2}{5}$, and $y = ax + b$, what is the value of b?

14 _____

15 If A = {8, 12, 18, 20} and B = {–2, 4, 10, 16, 22}, what is
a $A \cup B$? b $A \cap B$?

15a _____

b _____

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