

Distance between two points — Points in the first quadrant

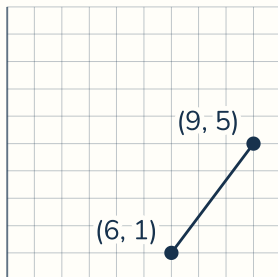
Name: _____

Date: _____



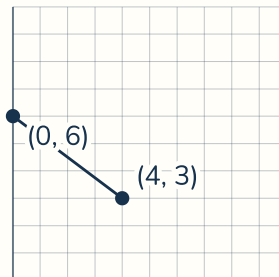
Find the distance between the two points.

1



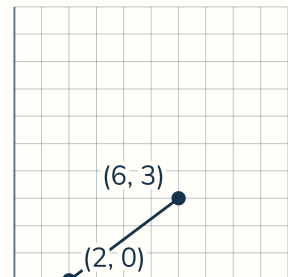
5 units

2



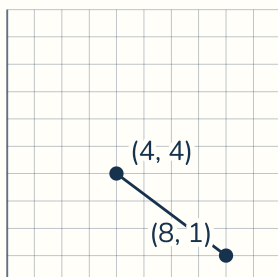
_____ units

3



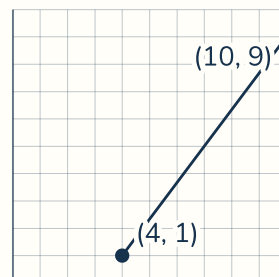
_____ units

4



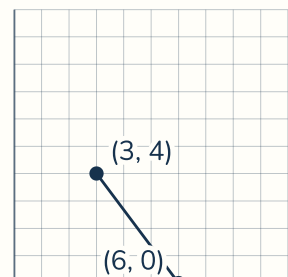
_____ units

5



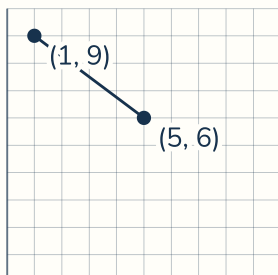
_____ units

6



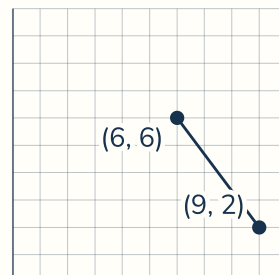
_____ units

7



_____ units

8



_____ units



Midpoint of a segment — Points in the first quadrant

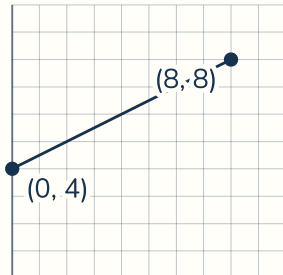
Name: _____

Date: _____



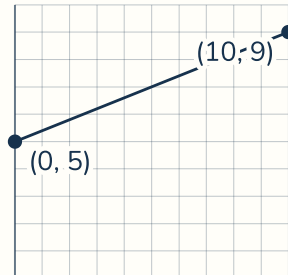
Find the midpoint of each segment.

1



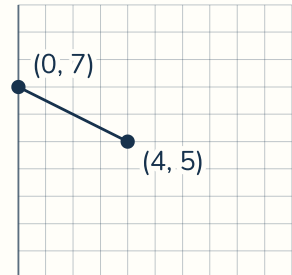
(4 , 6)

2



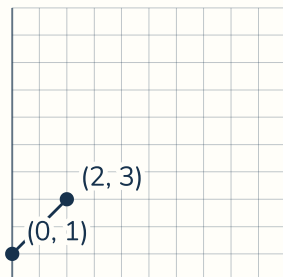
(_____ , _____)

3



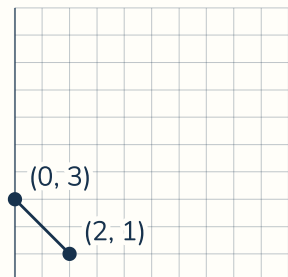
(_____ , _____)

4



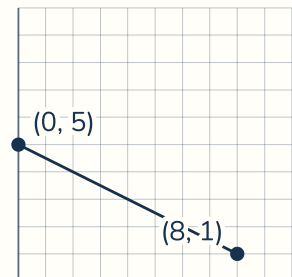
(_____ , _____)

5



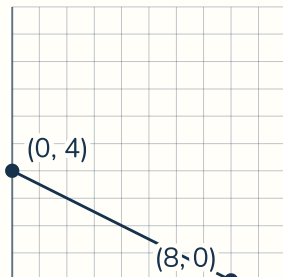
(_____ , _____)

6



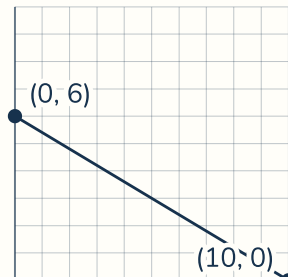
(_____ , _____)

7



(_____ , _____)

8



(_____ , _____)



Transformations — Sliding a point

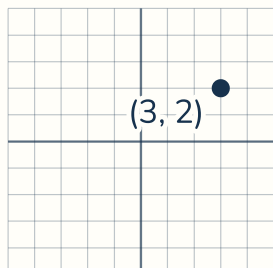
Name: _____

Date: _____



Move each point as described. Write where it lands.

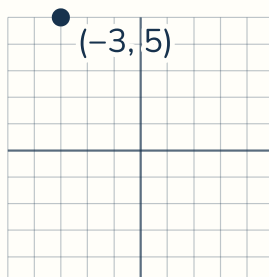
1



4 left

(-1 , 2)

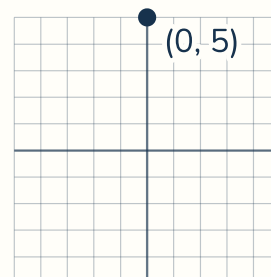
2



1 left

(,)

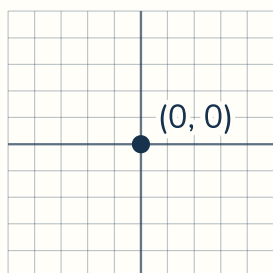
3



5 down

(,)

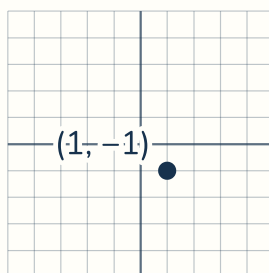
4



4 right and 5 down

(,)

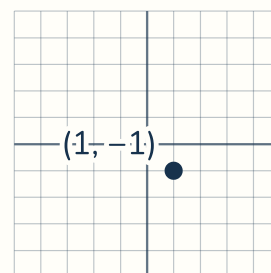
5



2 right and 1 down

(,)

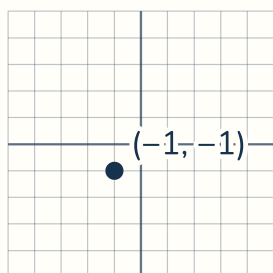
6



4 right and 5 up

(,)

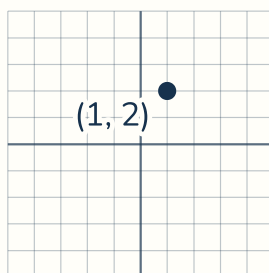
7



1 left and 4 down

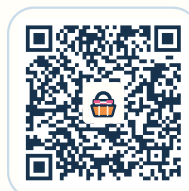
(,)

8



4 left and 1 up

(,)



Transformations — Reflecting a point

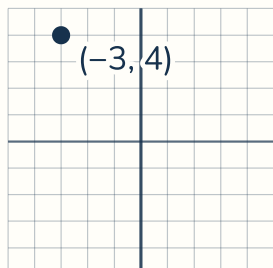
Name: _____

Date: _____



Reflect each point. Write where it lands.

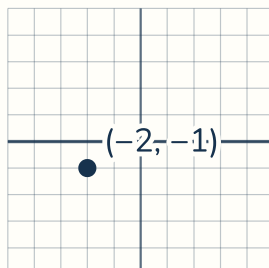
1



in the y-axis

(3 , 4)

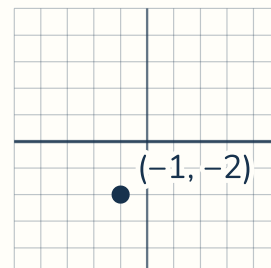
2



in the x-axis

(_____ , _____)

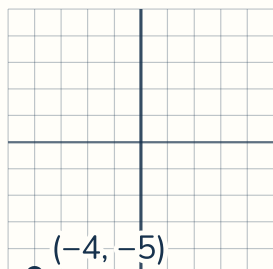
3



in the x-axis

(_____ , _____)

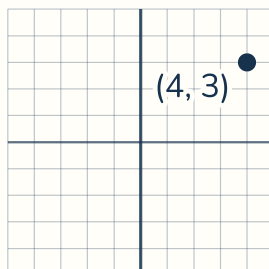
4



in the y-axis

(_____ , _____)

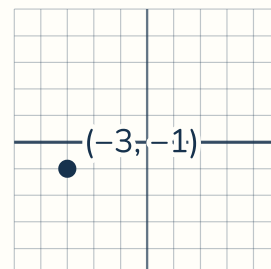
5



in the y-axis

(_____ , _____)

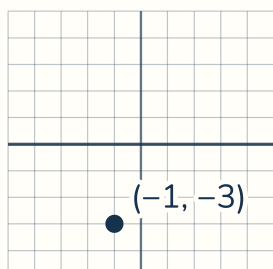
6



in the x-axis

(_____ , _____)

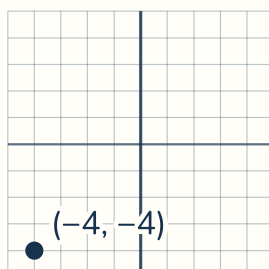
7



in the x-axis

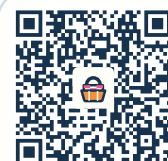
(_____ , _____)

8



in the y-axis

(_____ , _____)



Transformations — Rotating about the origin

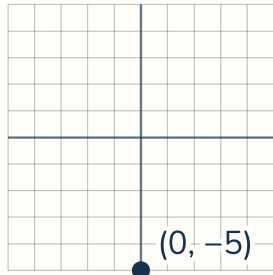
Name: _____

Date: _____



Rotate each point about the origin. Write where it lands.

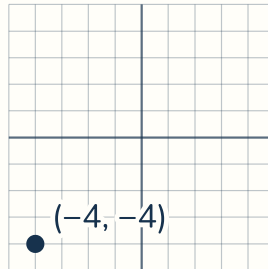
1



180° about O

(0 , 5)

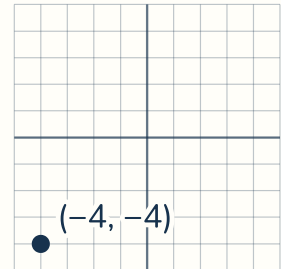
2



90° clockwise about O

(,)

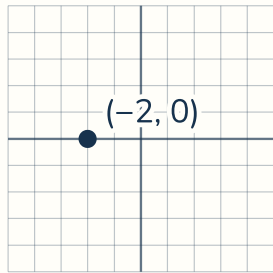
3



180° about O

(,)

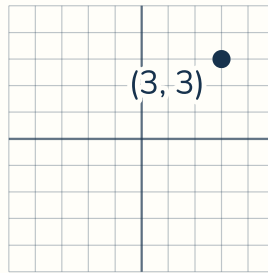
4



180° about O

(,)

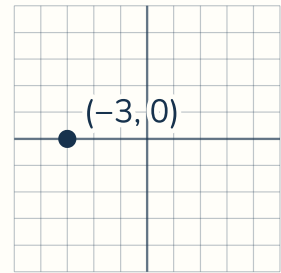
5



90° clockwise about O

(,)

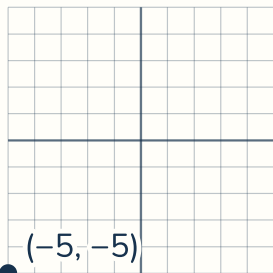
6



90° counterclockwise about O

(,)

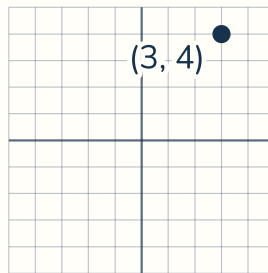
7



90° counterclockwise about O

(,)

8



90° counterclockwise about O

(,)



Similar figures — Sides to 12

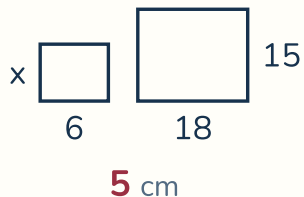
Name: _____

Date: _____

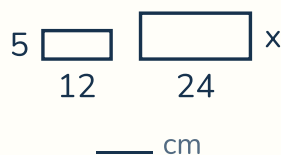


Each pair of shapes is the same shape at two sizes. Find the missing length.

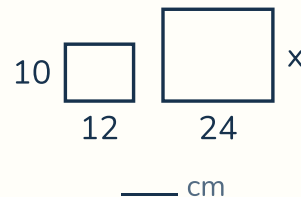
1



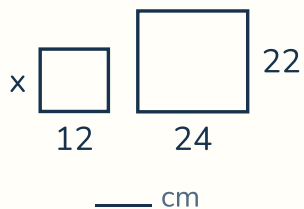
2



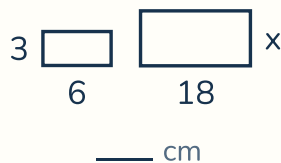
3



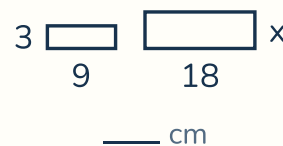
4



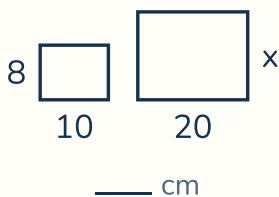
5



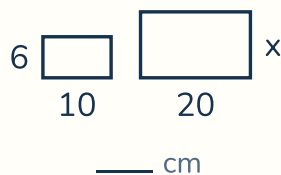
6



7



8



Power Pack · Coordinate geometry — Answer key



Distance

- | | | | |
|--------------------------------|------------------------------|------------------------------|------------------------------|
| 1. (6, 1) to (9, 5): 5 units | 2. (0, 6) to (4, 3): 5 units | 3. (2, 0) to (6, 3): 5 units | 4. (4, 4) to (8, 1): 5 units |
| 5. (4, 1) to (10, 9): 10 units | 6. (3, 4) to (6, 0): 5 units | 7. (1, 9) to (5, 6): 5 units | 8. (6, 6) to (9, 2): 5 units |

Midpoint

- | | | | |
|------------------------------|-------------------------------|------------------------------|-------------------------------|
| 1. (0, 4) and (8, 8): (4, 6) | 2. (0, 5) and (10, 9): (5, 7) | 3. (0, 7) and (4, 5): (2, 6) | 4. (0, 1) and (2, 3): (1, 2) |
| 5. (0, 3) and (2, 1): (1, 2) | 6. (0, 5) and (8, 1): (4, 3) | 7. (0, 4) and (8, 0): (4, 2) | 8. (0, 6) and (10, 0): (5, 3) |

Translations

- | | | | |
|--|-------------------------------------|---|---------------------------------------|
| 1. (3, 2) 4 left: (-1, 2) | 2. (-3, 5) 1 left: (-4, 5) | 3. (0, 5) 5 down: (0, 0) | 4. (0, 0) 4 right and 5 down: (4, -5) |
| 5. (1, -1) 2 right and 1 down: (3, -2) | 6. (1, -1) 4 right and 5 up: (5, 4) | 7. (-1, -1) 1 left and 4 down: (-2, -5) | 8. (1, 2) 4 left and 1 up: (-3, 3) |

Reflections

- | | | | |
|----------------------------------|------------------------------------|------------------------------------|------------------------------------|
| 1. (-3, 4) in the y-axis: (3, 4) | 2. (-2, -1) in the x-axis: (-2, 1) | 3. (-1, -2) in the x-axis: (-1, 2) | 4. (-4, -5) in the y-axis: (4, -5) |
| 5. (4, 3) in the y-axis: (-4, 3) | 6. (-3, -1) in the x-axis: (-3, 1) | 7. (-1, -3) in the x-axis: (-1, 3) | 8. (-4, -4) in the y-axis: (4, -4) |

Rotations

- | | | | |
|--|--|---|---|
| 1. (0, -5) 180° about O: (0, 5) | 2. (-4, -4) 90° clockwise about O: (-4, 4) | 3. (-4, -4) 180° about O: (4, 4) | 4. (-2, 0) 180° about O: (2, 0) |
| 5. (3, 3) 90° clockwise about O: (3, -3) | 6. (-3, 0) 90° counterclockwise about O: (0, -3) | 7. (-5, -5) 90° counterclockwise about O: (5, -5) | 8. (3, 4) 90° counterclockwise about O: (-4, 3) |

Similar figures

- | | | | |
|---------------------------|----------------------------|-----------------------------|-----------------------------|
| 1. 6 by x and 18 by 15: 5 | 2. 12 by 5 and 24 by x: 10 | 3. 12 by 10 and 24 by x: 20 | 4. 12 by x and 24 by 22: 11 |
|---------------------------|----------------------------|-----------------------------|-----------------------------|

Power Pack · Coordinate geometry — Answer key



Similar figures

5. 6 by 3 and 18 by x: 9

6. 9 by 3 and 18 by x: 6

7. 10 by 8 and 20 by x: 16

8. 10 by 6 and 20 by x: 12