

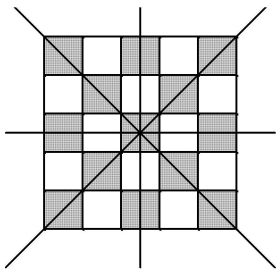
## Math 9 Accelerated - Exam Review: Chapter 7 Answer Section

### MULTIPLE CHOICE

1. C
2. B
3. C
4. A
5. C
6. B
7. C
8. C
9. D
10. D
11. B
12. B
13. B
14. C
15. C
16. A
17. B
18. D
19. D
20. A

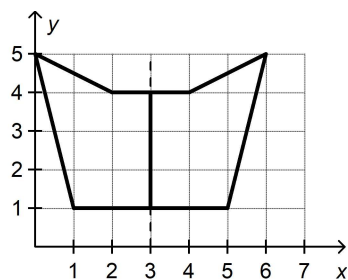
### SHORT ANSWER

1. Trapezoids C and D
2. 8 cm, 8 cm, 11.4 cm, and 16 cm
3.  $\frac{3}{4} = 0.75$
4. 105 cm
5. 26 cm by 12 cm
6.  $x = 20.4$   
 $y^\circ = 31^\circ$
7. circle, square
8.  $QR = 15$
9. 7.2 m

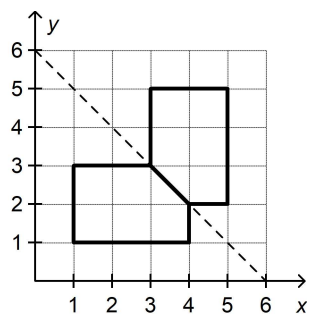


10.

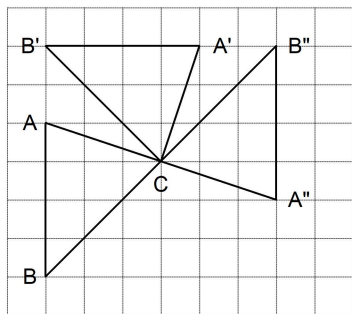
11.



12.



13. Quadrilateral B is the reflection image of quadrilateral A in the oblique line through  $(0, 8)$  and  $(8, 0)$ .  
 Quadrilateral C is the reflection image of quadrilateral A in the vertical line through 4 on the  $x$ -axis.  
 Quadrilateral D is the reflection image of quadrilateral A in the oblique line through  $(0, 0)$  and  $(8, 8)$ .



14.

## 15. Sample answers:

Rotate the square  $90^\circ$  clockwise about the centre.

Rotate the square  $90^\circ$  counterclockwise about the centre.

Rotate the square  $270^\circ$  clockwise about the centre.

Rotate the square  $270^\circ$  counterclockwise about the centre.

Rotate the square  $180^\circ$  about the centre.

Rotate the square  $360^\circ$  about the centre.

## PROBLEM

$$1. \ a) \ \text{The scale factor is: } \frac{\text{Length on scale diagram}}{\text{Length of rectangle}} = \frac{54 \text{ cm}}{9 \text{ cm}} = 6$$

The scale factor is 6.

$$b) \ \text{Side length of scale diagram} = 12 \text{ cm} \times 6 = 72 \text{ cm}$$

The side length of the scale diagram is 72 cm.

$$2. \ a) \ 38 \text{ m} = 3800 \text{ cm}$$

$$\text{The scale factor is: } \frac{\text{Length of model}}{\text{Length of cruise ship}} = \frac{15.2 \text{ cm}}{3800 \text{ cm}} = 0.004$$

The scale factor is 0.004.

$$b) \ 57 \text{ m} = 5700 \text{ cm}$$

$$\text{Length of model is: } 5700 \text{ cm} \times 0.004 = 22.8 \text{ cm}$$

The length of the model plane is 22.8 cm.

$$c) \ 10.4 \text{ m} = 1040 \text{ cm}$$

$$\text{Length of model} = 1040 \text{ cm} \times 0.004 = 4.16 \text{ cm}$$

The length of the model plane would be 4.16 cm.

No, a model of this size would probably be too small and too difficult to make.

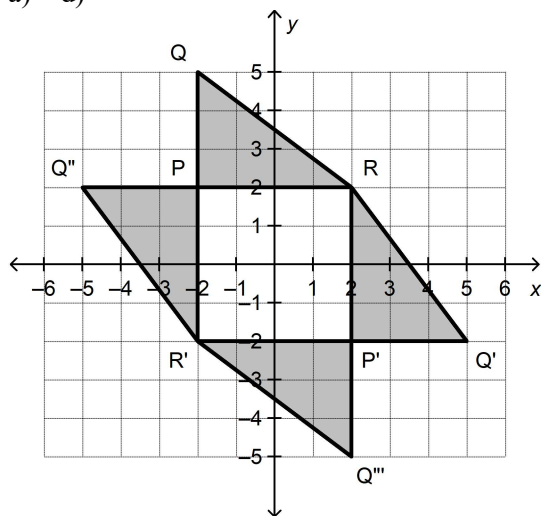
$$3. \ \text{From the diagram, } \angle D = \angle A = 90^\circ.$$

$\angle B$  is common to both triangles.

Since two pairs of corresponding angles are equal, the angles in the third pair must also be equal because the sum of the angles in each triangle is  $180^\circ$ .

Since 3 pairs of corresponding angles are equal,  $\triangle EDB \sim \triangle CAB$

4. a) – d)



e) The shape  $Q''PQRQ'P'Q'''R'$  has coordinates:  $Q''(-5, 2)$ ,  $P(-2, 2)$ ,  $Q(-2, 5)$ ,  $R(2, 2)$ ,  $Q'(5, -2)$ ,  $P'(2, -2)$ ,  $Q'''(2, -5)$ ,  $R'(-2, -2)$

f) The shape has two lines of symmetry: the line through points  $P$  and  $P'$  and the line through points  $R$  and  $R'$ . Each point on one side of the line has a corresponding point on the other side.

5.

