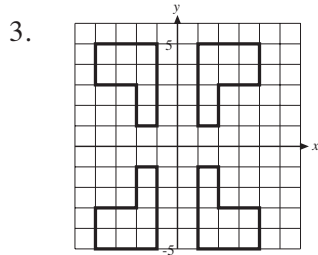
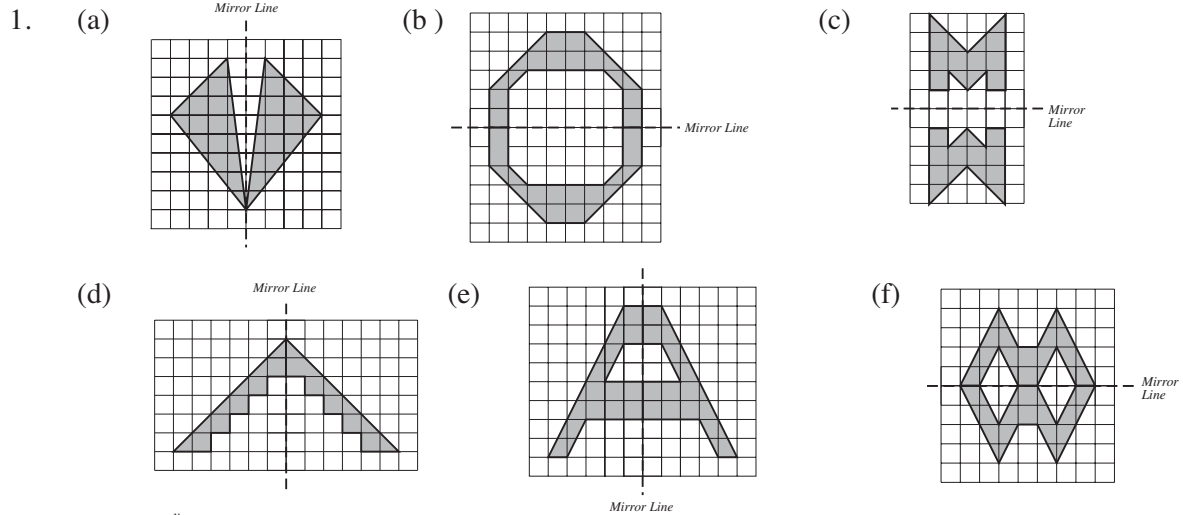


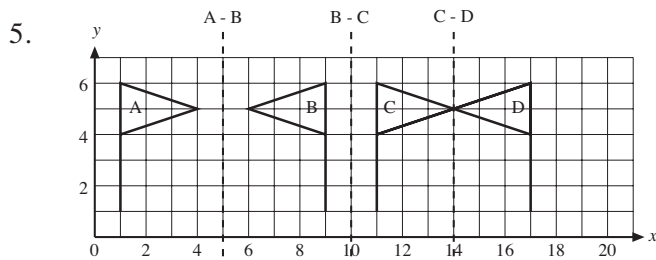
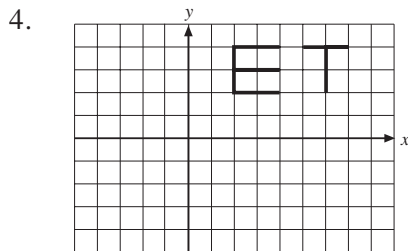
Reflections, Rotations and Enlargements

Answers

1 Reflections



- 3.
- (c) $(-1, 1), (-1, 5), (-4, 5), (-4, 3), (-2, 3), (-2, 1)$
- (d) $(-1, -1), (-1, -5), (-4, -5), (-4, -3), (-2, -3), (-2, -1)$
- (e) Reflect original shape in x -axis



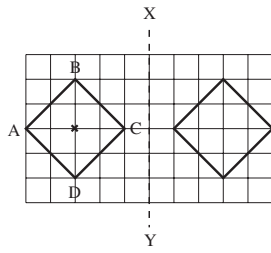
6. (b) (iii) x coordinates become negative, y coordinates stay the same.
- (c) (iii) y coordinates become negative, x coordinates stay the same.

Reflections, Rotations and Enlargements

Answers

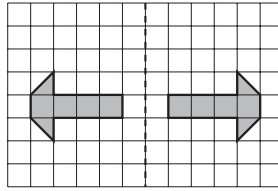
1

7.



8. (a) 5 square units

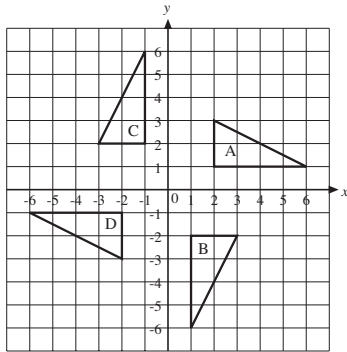
(b)



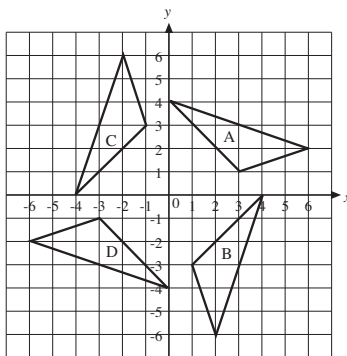
Mirror Line

2 Rotations

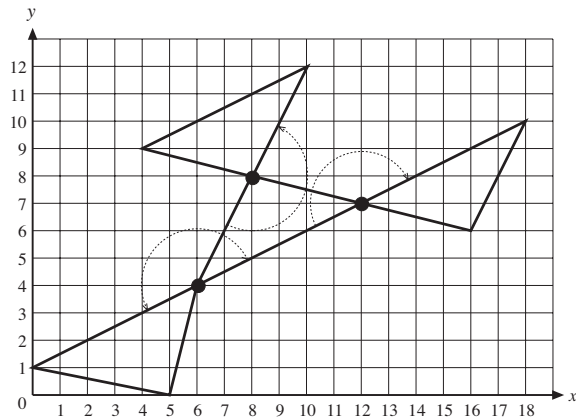
1.



2.



3.

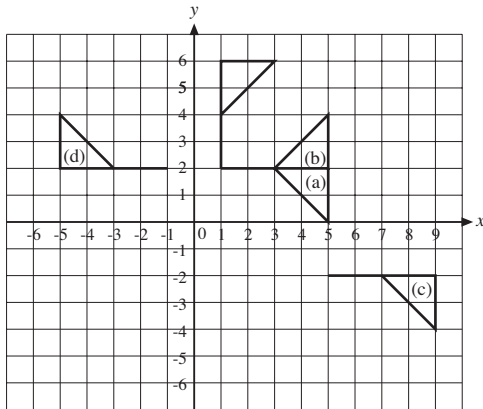


Text J1 Reflections, Rotations and Enlargements

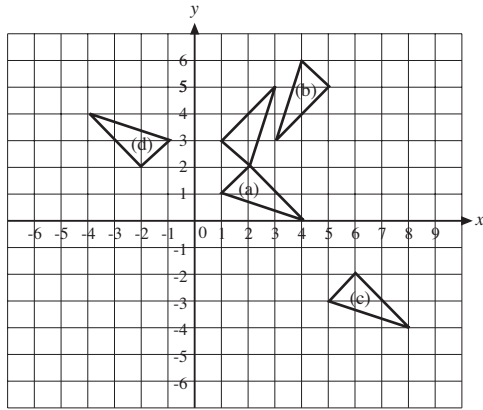
Answers

2

4.



5.

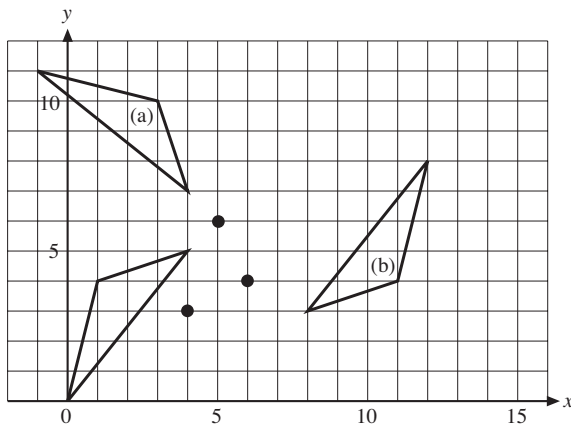


6. (a) A to B: 90° rotation, clockwise, centre (0, 0) (b) A, B and D
 A to C: 180° rotation, centre (0, 0)
 A to D: 90° rotation, anticlockwise, centre (0, 0)
 A to E: 180° rotation, centre (5, 3)

7. A to B: (9, 9) A to C: (8, 5) A to D: (10, 7) A to E: (7, 11)

8. (a) A to B: 180° rotation, centre (5, 7) (b) E and B
 A to C: 180° rotation, centre (0, 4.5)
 A to D: 90° rotation, clockwise, centre (0.5, 3.5)
 A to E: 90° rotation, anticlockwise, centre (-1, 5)

9.



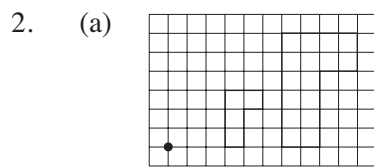
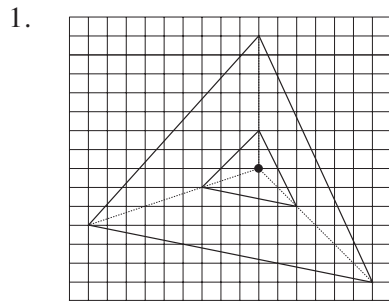
(c) 180° rotation, centre (6, 4)

10. 180° rotation, centre (13, 5), followed by 180° rotation, centre (7, 3)

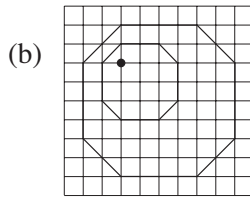
Reflections, Rotations and Enlargements

Answers

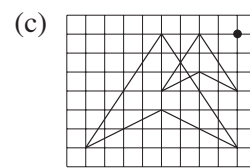
3 Enlargements



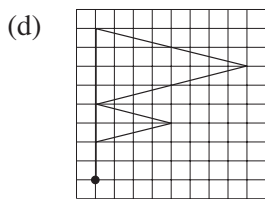
Scale factor: 2



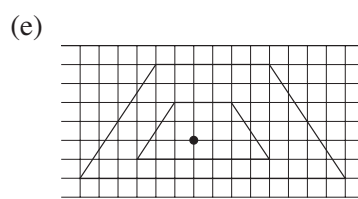
Scale factor: 2



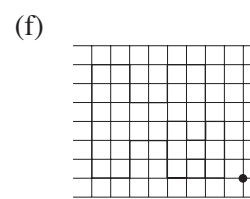
Scale factor: 2



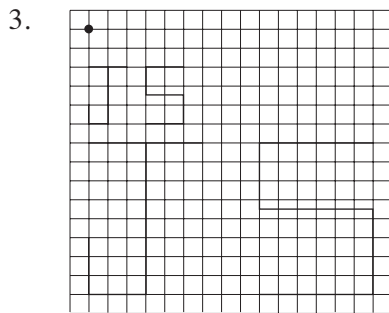
Scale factor: 2



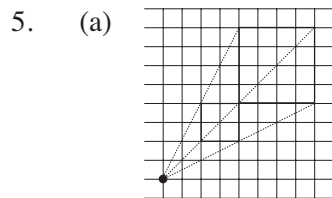
Scale factor: 3



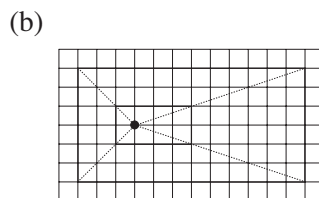
Scale factor: 3



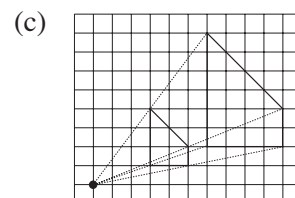
4. (a) 2 (b) 5 (c) 3 (d) 2.5 (e) 4 (f) 1.5



Scale factor: 2



Scale factor: 3

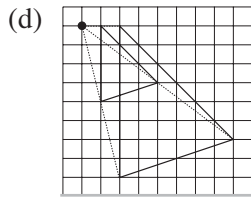


Scale factor 2

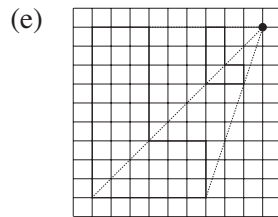
Reflections, Rotations and Enlargements

Answers

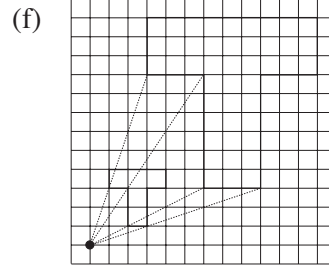
3



Scale factor: 2

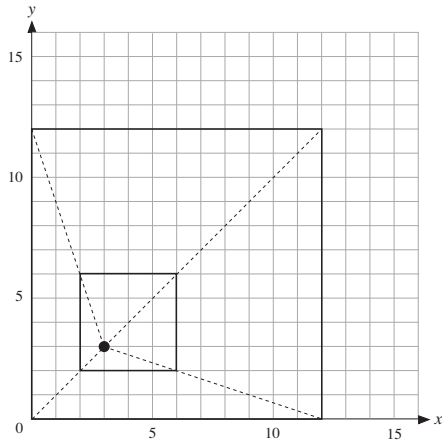


Scale factor: 3

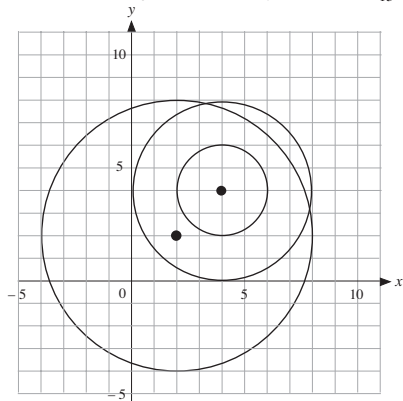


Scale factor: 3

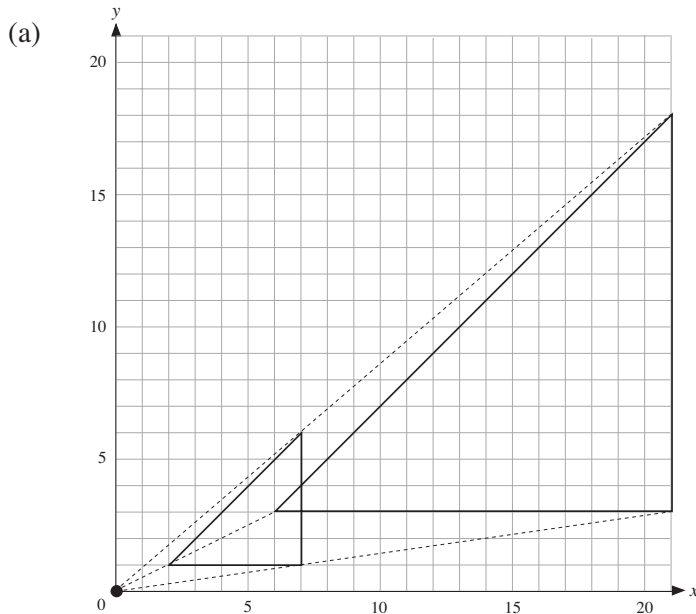
7.



8.



9.



(b) 3

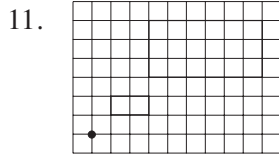
(c) (0,0)

Reflections, Rotations and Enlargements

Answers

3

10. (c) (2, 0), (4, 0), (3, 3); (4, 0), (8, 0), (6, 6) Each coordinate is multiplied by 2.
 (d) (6, 0), (12, 0), (9, 9)
 (e) Each coordinate is multiplied by the scale factor.



12. (a)

| | | | |
|---|---|----|----|
| 1 | 2 | 3 | 4 |
| 4 | 8 | 12 | 16 |
| 1 | 4 | 9 | 16 |

 (b)

| |
|----|
| 8 |
| 32 |
| 64 |

13. (a) $\frac{1}{3}$ (b) $\frac{1}{2}$ (c) $\frac{1}{6}$ (d) $\frac{3}{4}$ (e) $\frac{2}{3}$ (f) $\frac{1}{2}$

14. (a) $\frac{1}{5}$, (8, 7) (b) $\frac{2}{3}$, (13, 9) (c) $\frac{1}{4}$, (9, 1)

15. (a) $\frac{1}{5}$ (b) 6 cm, 9 cm

16. (a) (i)  (ii) 2 cm² (b) 1.2 cm