

Student Text *UNIT 36 Constructions and Enlargements*

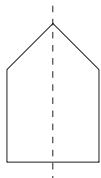
Answers

36.1 Drawing and Symmetry

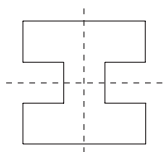
2. (a) 5 cm (b) 7.8 cm (c) 3.2 cm (d) 7.8 cm

3. (a) 2 cm (b) 2.5 cm (c) 3 cm (d) 5 cm

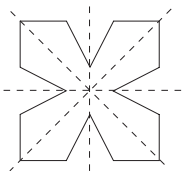
4. (a) (i) One line of symmetry (ii) 1



(b) (i) Two lines of symmetry (ii) 2

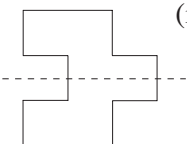


(c) (i) Four lines of symmetry (ii) 4



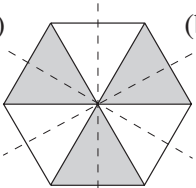
(d) (i) No lines of symmetry (ii) 2

(e) (i) One line of symmetry (ii) 1



(f) (i) No lines of symmetry (ii) 2

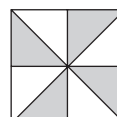
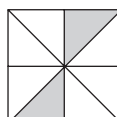
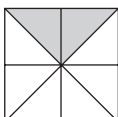
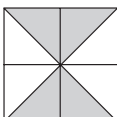
5. (a) (b) 3



6. (a) 2, 2 (b) 1, 1 (c) 4, 4 (d) 1, 1

7. (a) A (b) D, E (c) C, F (d) B, D, E (e) C, F

8. (a) (b) (c) (d)



Student Text *UNIT 36 Constructions and Enlargements*

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36.2 Constructing Triangles and Other Shapes

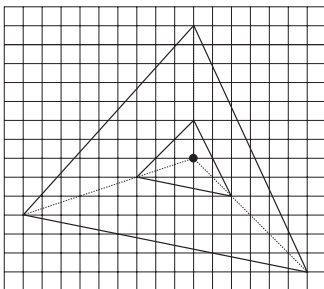
2. (a) 4.4 (b) $AC \approx 3.1$ cm, $BC \approx 4.4$ cm (c) $AB \approx 10.4$ cm
 (d) 46.6° (e) $AC \approx 3.6$ cm (f) $BC \approx 11.6$ cm
3. 4.7 cm
4. 29.0° , 75.5° , 75.5°
7. (b) 4.6 cm, 7.8 cm
9. 2.6 cm
10. 48°
13. (a) 26 cm
16. (a) As $KLMN$ is a square, angle $KNM = 90^\circ$, and in triangle KNM ,

$$x^2 + x^2 = 8^2$$

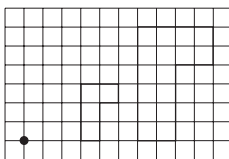
 i.e. $2x^2 = 64 \Rightarrow x^2 = 32$

36.3 Enlargements

1.

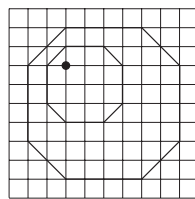


2. (a)



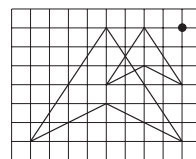
Scale factor: 2

(b)



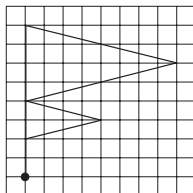
Scale factor: 2

(c)



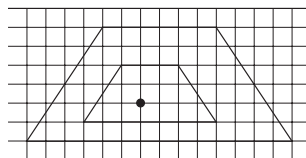
Scale factor: 2

(d)



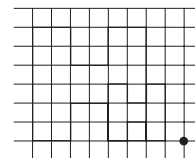
Scale factor: 2

(e)



Scale factor: 3

(f)



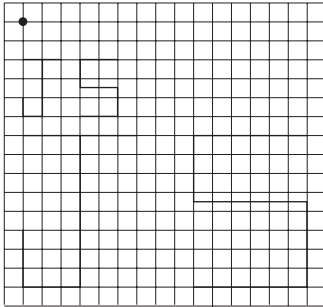
Scale factor: 3

Student Text *UNIT 36 Constructions and Enlargements*

Answers

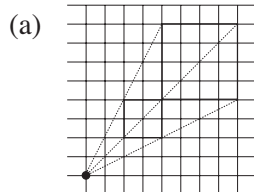
36.3

3.



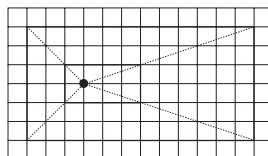
4. (a) 2 (b) 5 (c) 3 (d) 2.5 (e) 4 (f) 1.5

5.



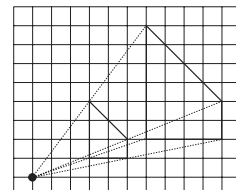
Scale factor: 2

(b)



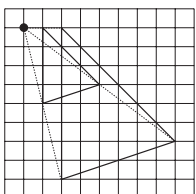
Scale factor: 3

(c)



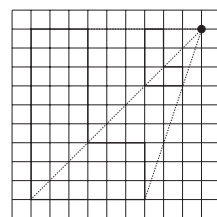
Scale factor 2

(d)



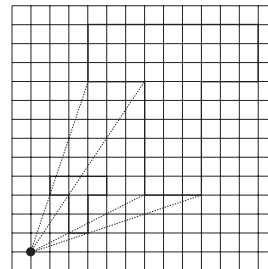
Scale factor: 2

(e)



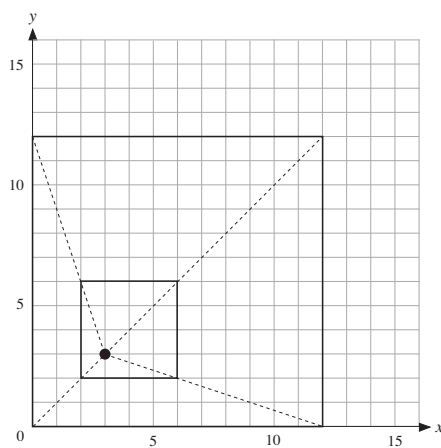
Scale factor: 3

(f)



Scale factor: 3

7.

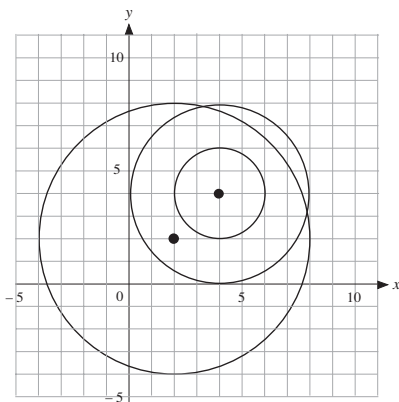


Student Text *UNIT 36 Constructions and Enlargements*

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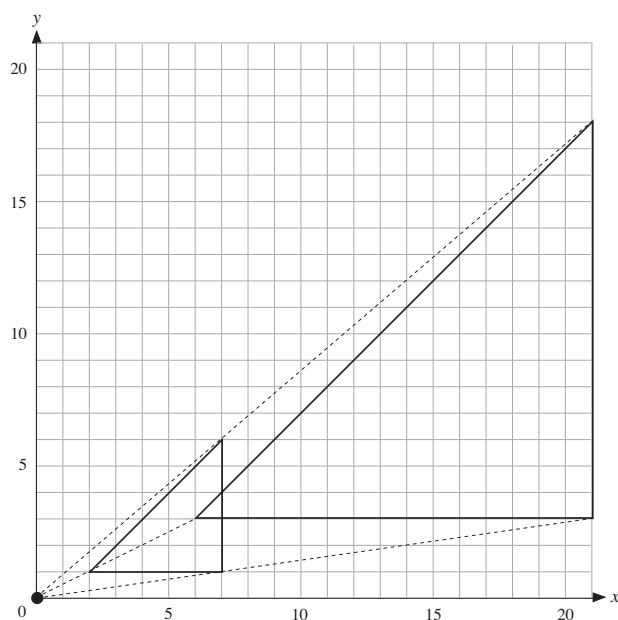
36.3

8.



9.

(a)



(b) 3

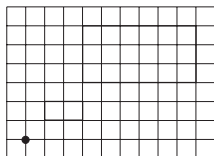
(c) (0,0)

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.

11.



12. (a)

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

(b)

8
32
64

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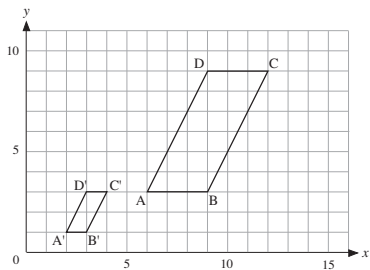
Answers

36.3

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