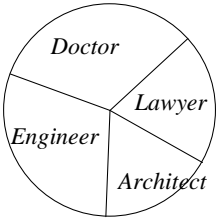


SET 1

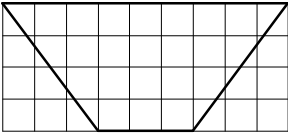
ANSWERS

- 1 $20 + (-6)$
14
- 2 $6.5 \times \frac{2}{5}$
2.60
- 3 (a) -3
(b) $(1 - \frac{3}{4})^3 @ \frac{3}{4} @ \frac{1}{4}$
 $\frac{1}{64}$
- 4 (a) $4k^2 - 8k$
(b) $-2e - 4$
- 5 (a) $\frac{2}{5}$
(b) $5x - 12 = 3$
3
- 6 Perpendicular bisector of line KK' & JJ'
- 7 $8x^7y^7$
- 8 $km + mn = j$
 $m(k + n) = j$
 $m = \frac{j}{k+n}$
9. Translation $(\begin{smallmatrix} 9 \\ -1 \end{smallmatrix})$
- 10 (a) i Draw an arc, centre E and radius EF
ii Draw perpendicular bisector of line AD
(b) Mark the intersection
11. $\frac{3m - m - 2}{6m^2}$
 $\frac{2m - 2}{6m^2}$
 $\frac{m - 1}{3m^2}$
12. Construct 60° then 30°
Draw angle bisector
Complete diagram
From R cross line PQ,
Draw line
PQ from R = _____
13. $16y^2 - 8y + 1$
 $16y^2 - 10y + 1$
14. $2^{1+3m} = 2^1$
 $1+3m = 0$
 $-\frac{1}{3}$

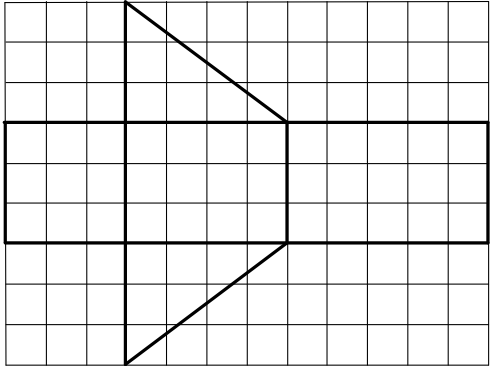
ANSWERS

- 15 $\frac{8 + 24 + 48 + 80 + 20}{30}$
6
 - 16 $(2e - 1)(2e + 1)$
 - 17 (a) $e < 3$
(b) $6r - 3r \leq -10 + 4$
 $r \leq -2$
 - 18 (a) 7
(b) angles: $117^\circ, 108^\circ, 63^\circ$
- 
- A circle is divided into four sectors by two perpendicular diameters. The sectors are labeled: Doctor (top), Lawyer (right), Architect (bottom), and Engineer (left).
- 19 (a) $\frac{6}{10} @ \frac{3}{5}$
(b) 3×5
15
 - 20 Uniform scale
All points correctly plotted
Smooth curve passes through all the points.

SET 2

ANSWERS	
1	$\frac{15-9}{6}$
2	0.88 0.9
3	(a) 1.69 (b) $\left(\frac{1}{2} - 0.1\right)^2 = (0.4)^2$
4	0.16 
5	Translation $\begin{pmatrix} -6 \\ 0 \end{pmatrix}$
6	$k - j \cdot mn$ $m = \frac{k-j}{n}$
7	(a) -24 (b) $2p = -22$ $p = -11$
8	(a) $3w - 5$ (b) $x^2 - 6x + 9 - 5x + 4$ $x^2 - 11x + 13$
9.	(a) $3(k-3)$ (b) $4(1-4y^2)$ $4(1-2y)(1+2y)$
10	$\frac{p^4}{pq^{-1}}$ p^3q^4
11.	$2^2 \times 2^6 \times 2^{-5}$ 2^3 8
12.	(a)i Arc, center S, radius = 5 units ii Line in the middle: 3 units from line SR & PQ.. (b) Intersection
13.	$k < 6$ $k \geq -2$ -2, -1, 0, 1, 2, 3, 4, 5

14.	9 or 12 in the diagram (a) $\frac{12}{20}$ (b) 9
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ANSWERS	
15	
16	(a) 20 (b) Vertical axis 1: 2 4 bars.
17	(a) Construct 60° Construct $PS=PR=8$ cm Construct SR Complete diagram (b) 7 cm
18	(a) $\angle RSP$ (b) $\sqrt{12^2 + 5^2}$ 13
19	(a) Kitchen: add 3 legend (b) $350 - 150$ 200
20	Uniform scale All points correctly plotted Smooth curve passes through all the points.

SET 3

ANSWERS

1. $-57 + 20$
 -37
2. $-0.6 - 0.15$
 -0.75
3. (a) 0.64
(b) $\left(1 - \frac{4}{5}\right)^2$
 $\frac{1}{25}$
4. (a) 4
(b) $2y = -8$
 $y = -4$
5. (a) $3p(q - 6)$
(b) $2(h^2 - 25)$
 $2(h - 5)(h + 5)$
6. $\frac{3m - m + 8}{6m^2}$
 $\frac{2m + 8}{6m^2}$
 $\frac{m + 4}{3m^2}$
7. (a) $4x^2 + 12x + 9$
(b) $3x + 6y - x - y$
 $2x + 5y$
8. $5p - 3 = 2q$
 $p = \frac{2q + 3}{5}$
9. Construct 90° , then 45°
Mark points P and Q
Complete diagram
Construct an arc on PQ from R
Then, draw the perpendicular line.
RT = _____
10. (a)i Draw a quadrant, centre O, radius 10 units
ii Draw the angle bisector

(b) Mark the intersection

11. The image correctly drawn
12. Enlargement
Scale factor 2
Centre (1, 1)
13. (a) 45
(b) 24

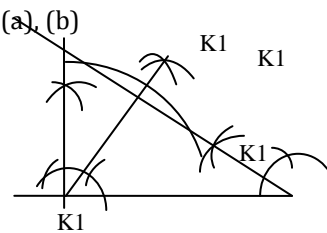
Q	MARKING SCHEME
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- | | |
|----|--|
| 14 | $2^2 \times 2^2 \div 2^3$
2^{2+2-3}
2 |
| 15 | $4^{3y-2} = 4^{y+1}$ @ $3y - 2 = y + 6$
$y = 4$ |
| 16 | $x \leq 4$
$x \geq -2$
-2, -1, 0, 1, 2, 3, 4 |
| 17 | 4 bars correctly drawn |
| 18 | (a) 12 (6, 8 seen)
(b) $\frac{6}{10}$ |
| 19 | Median score = 4 |
| 20 | Uniform scale
All points correctly plotted
Smooth curve passes through all the points. |

SET 4

ANSWERS	
1	$7 - 12$ -5
2	$\frac{0.6}{0.3}$ $\frac{2}{2}$
3	(a) -5 (b) $10 + 6$ 16
4	(a) 6 (b) $2x + 4 = 3x$ $3x - 2x = 4$ $x = 4$
5.	(a) $3(m + 4)$ (b) $3(9 - y^2)$ $3(3 - y)(3 + y)$
6.	(a) $3x + xy$ (b) $3r^2 + 3rs + 4rs + 4s^2$ $3r^2 + 7rs + 4s^2$
7	The diagram correctly drawn
8.	Draw 2 straight lines through two corresponding point of image-object. The intersection is the centre of the Enlargement.
9.	$\frac{1 + 2(k - 1)}{2h}$ $\frac{1 + 2k - 2}{2h}$ $\frac{2k - 1}{2h}$
10	(a) $x > 2$

	(b) $3m - 2m \geq 8 - 7$ $m \geq 1$
11.	$5a = b - 9$ $a = \frac{b - 9}{5}$
12.	(a) 9 (b) $\frac{9m^2n^{4-1}}{9m^2n^3}$
13.	(a) $3 \ 3 \ 2 \ 6 \ 2 \ 1$ (b) 5
14.	Label the axes and suitable scale used. 3 bars drawn correctly

ANSWERS	
15	The net of the prism correctly drawn
16	(a) PR (b) (i) Draw arc PR, (ii) Draw line SQ (c) Mark the intersection
17.	(a), (b)  (c) _____
18	(a) $\angle FGH$ (b) GH
19	DB = 4, @ AB = 12 seen EB = 15 seen 11
20	Uniform scale All points correctly plotted Smooth curve passes through all the points.

SET 5

ANSWERS

1. $\frac{17}{6}$
2. 6.25
3. (a) $-\frac{3}{5}$
(b) 8.7
4. $\frac{8}{21}$
5. $16x^2 - 17x - 4$
6. (a) $4b(b - 7c)$
(b) $6(1 - 2y)(1 + 2y)$
7. Move the object 4 units forward and 6 unit downward.
8. PQRST drawn correctly
Note: Refer to corresponding points
9. Anticlockwise rotation of 90° about centre (2, 2)
10. The size of the drawing twice as the size of the diagram.
11. $\frac{2q - 1}{3pq}$
12. $s = \frac{3r^2}{5 + 2r}$
13. 10
14. 1
15. (a) 9

SET 6

- (b) $-\frac{26}{5}$
16. $y \leq 2$
17. (a) 1-4, 5-12, 13-18, 19-20
(b) 60
(c) 60
18. (a) SYQ/ SQ/ QS
(b) (i) Draw a circle
Radius 4 units
Centre Y
(ii) Two parallel lines
2 units line XZ.
(c) 4
19. Draw 30° at M
An arc from M to L, 3 cm.
An Arc from N to K.
An Arc from L to K.
Complete the diagram.
20. Uniform scale
All points correctly plotted
Smooth curve passes through all the points.

ANSWERS

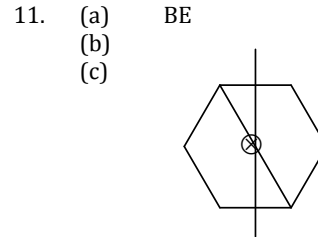
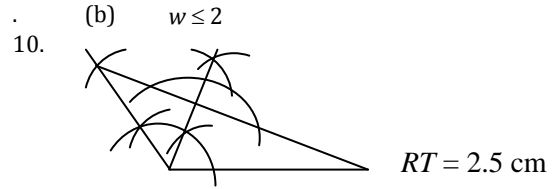
1. 0.2
2. $\frac{2}{5}$
3. (a) 0.6
(b) 9
4. (a) - 5
(b) 6
5. (a) a^5
(b) $\frac{4}{3}$
6. (a) $a > - 1$
(b) $b \leq 4$
7. $m = \sqrt{5n + 3}$
8. (a) $5x(1 - 3y)$
(b) $(p - q)(7 + q)$
9. $\frac{p - 1}{2p^2}$
10. (a) $15x + 10$
(b) $-2m - 9$
11. (a) score \times freq: 2, 8, 9, 20, 30
(b) 3.45
12. (a) 20
(b) Complete the value on vertical axis
Draw the bar correctly

- 13.
14. (a) $\frac{5}{13}$
 (b) 3
15. (a) $\angle ABC$
 (b) 15
16. Line AB drawn correctly
17. Translation $\begin{pmatrix} -5 \\ -4 \end{pmatrix}$
18. The net of the prisma is drawn correctly
19. (a) PR
 (b) (i) SQ
 (ii) Two parallel lines
 2 units line XZ.
- (c) 2
- 19
20. Uniform scale
 All points correctly plotted
 Smooth curve passes through all the points.

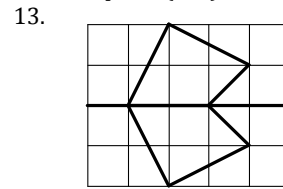
SET 7

ANSWERS

1. -20
2. $\frac{13}{20}$
3. (a) 0,12
 (b) $\frac{1}{125}$
4. (a) -3
 (b) 3
5. (a) $3m(1 - 4n)$
 (b) $3(x - 5)(x + 5)$
6. $\frac{5 - 16 - 2r}{8u}$
 $\frac{-11 - 2r}{8u}$
7. (a) $7p - 2$
 (b) $9x^2$
8. $r = \sqrt{\frac{p^2 + 4}{3}}$
9. (a) $x > 7$



12. Rotation 180°
 at point (1, 1)

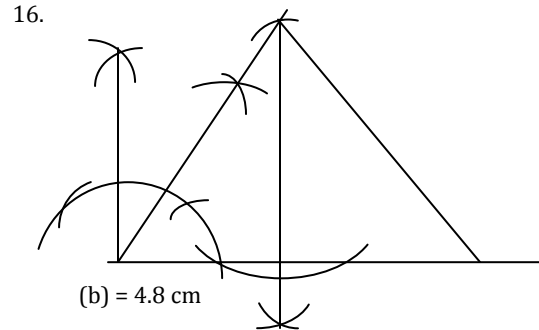


14. (a) 2 8 5 4 1
 (b) 2
15. (a) $h^{10}g^{12}$
 (b) 4096
16. 2
17. -2, -1, 0, 1, 2, 3, 4
- 18.

ANSWERS

19. (a) $\frac{5}{12}$
 (b) 30
20. Uniform scale
 All points correctly plotted
 Smooth curve passes through all the points.

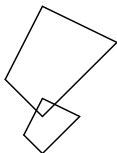
- P
9. $\frac{4-w}{2n}$
 10. 6, 7, 8, 9
 11. $\frac{p-s}{q}$
 12. (a) k^8
(b) m^{-2}
 13. 9
 14. $2x^2 - 12xy + 18y^2$
 15. (a) Parallel line to PQ, distance = 3 units.
(b) Draw a quadrant, centre Q, radius 5 units.
Angle bisector from intersecting line PR & QS
Mark correctly the two intersections.



SET 8

ANSWERS

1. $\frac{2}{3}$
2. 14.5
3. (a) 0.4
(b) $\frac{1}{64}$
4. (a) -7
(b) 9
5. $2(5-k)(5+k)$
6. $p-8q$
7. The triangle correctly drawn.
- 8.



ANSWERS

17. (a) 5
(b) $\frac{3}{4}$
- 18.

- 19. 3 bars correctly drawn.
- 20. Uniform scale
All points correctly plotted
Smooth curve passes through all the points.