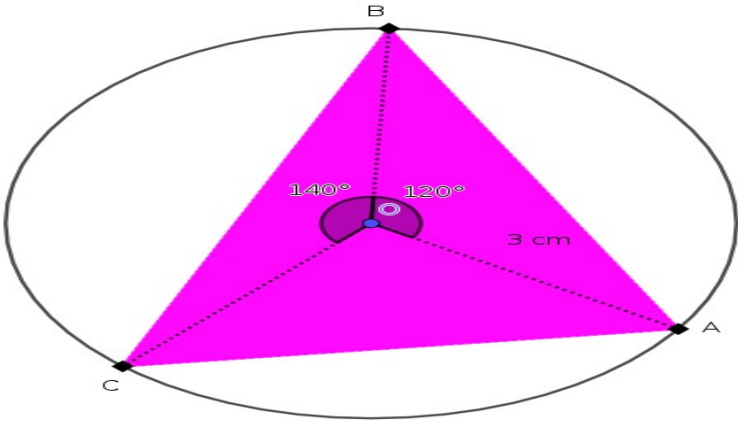
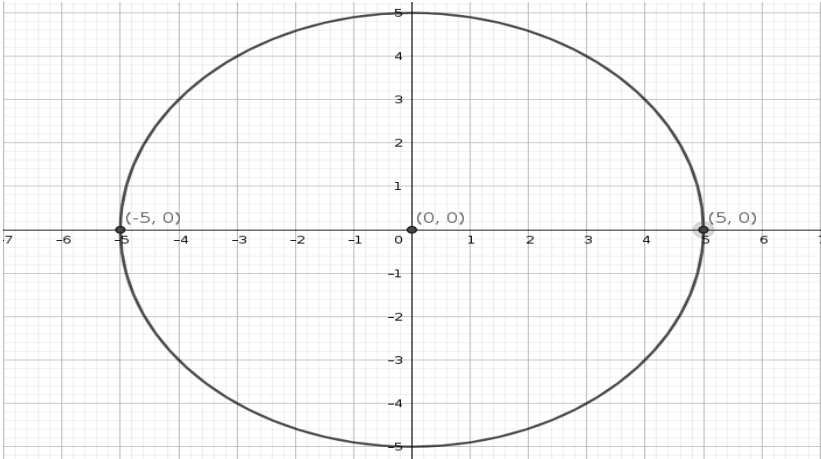
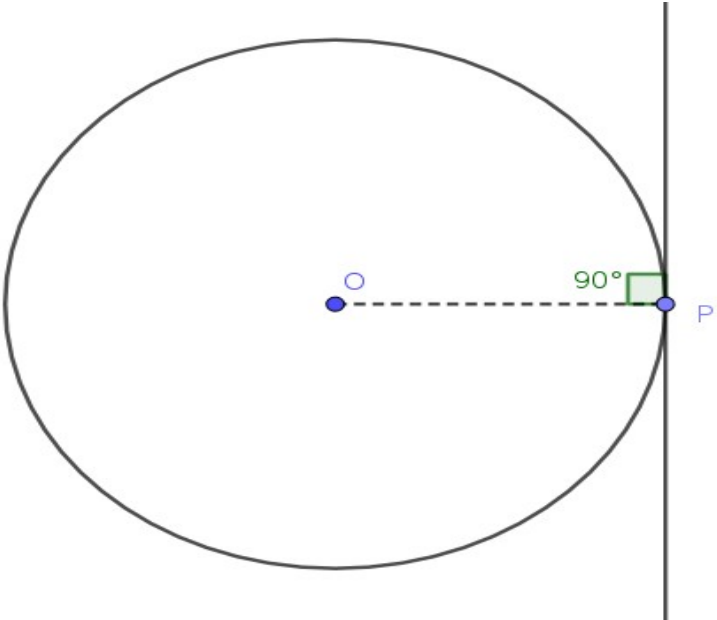
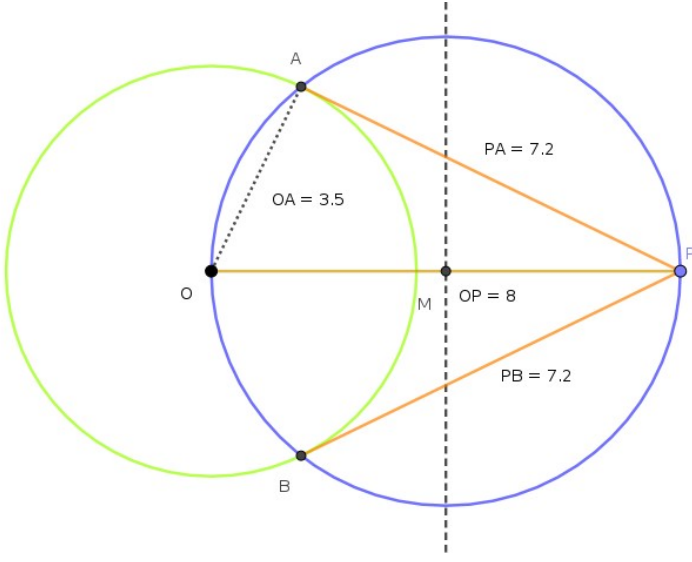
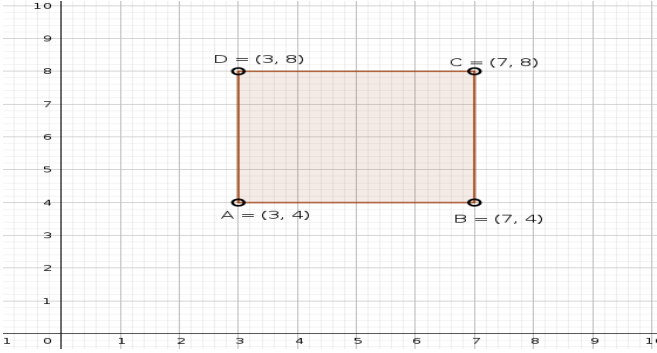
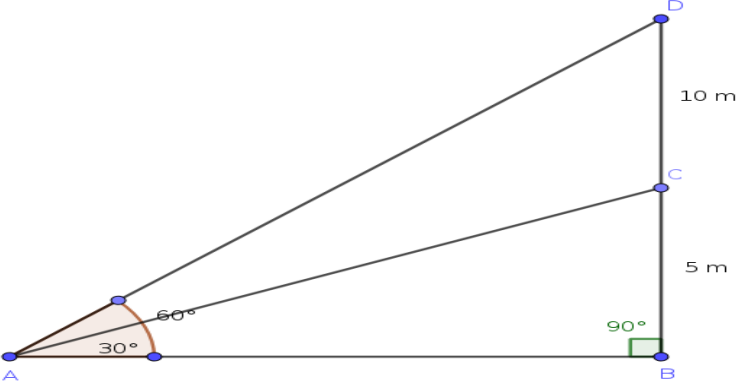


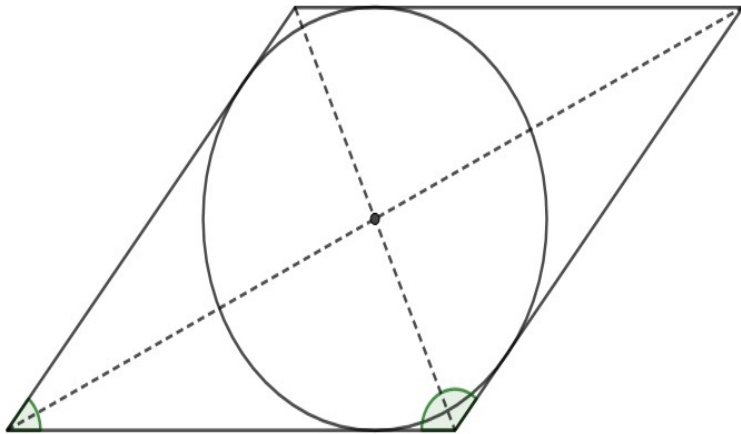
Question Number	Scoring Indicators	Sub Score	Total Score
1	5	1	1
2	90°	1	1
3	4 cm	1	1
4	(4,3)	1	1
5	2	1	1
6	a) 55 b) 65	1 1	2
7	a) $\angle BOC = 100^\circ$ b) $\angle A = 50^\circ$	1 1	2
8	a) $P(\text{Red ball}) = 7/10$ b) $P(\text{Yellow ball}) = 3/10$	1 1	2
9	a) 3 units b) C (5, 5)	1 1	2
10	a) Either $(x-3)$ or $(x+2)$ b) $P(2) = -4$	1 1	2
11	a) 3 b) $x_4 = x+9$ c) $x_{11} = x+30$	1 1 1	3
12			3
13	a) length = $x+3$ b) $x(x+3) = 130$ On solving we get $x = -13$, or $x = 10$	1 2	3

	<i>Sides are 10 cm and 13 cm</i>		
14	a) $PB = AB - AP = 13 - 9 = 4 \text{ cm}$ b) $PC = \sqrt{PA \times PB}$; $PC = \sqrt{9 \times 4} = 6 \text{ cm}$	1 2	3
15	a) $AB = 2 \text{ cm}$ b) $\text{Diameter} = 2\sqrt{2} \text{ cm}$	2 1	3
16	a) $BR = 3 \text{ cm}$ b) $AB = 4 + 3 = 7 \text{ cm}$ c) $\text{Perimeter} = 7 + 7 + 6 = 20 \text{ cm}$	1 1 1	3
17	 <p>a) b) $(5, 0)$ and $(-5, 0)$</p>	1 2	3
18	a) $h = \sqrt{5^2 - 3^2} = 4 \text{ cm}$ b) $V = \frac{1}{3} \pi \times 3^2 \times 4 = 12 \pi \text{ cm}^3$	2 1	3
19			3

20	<p>a) Area of the shaded triangle = 10 sq cm</p> <p>b) Probability that the point lies inside the shaded region = $10/20 = 1/2$</p>	2	3
21	<p>a) $x_5 = 5 \times 3 + 5 - 3 = 17$</p> <p>b) $S_9 = 9 \times x_5 = 9 \times 17 = 153$</p> <p>c) $S_9 = 9 \times x_5 = 9 \times 34 = 306$</p>	1	4
22	<p>a) $x_6 = 0$</p> <p>b) $S_{11} = 11 \times x_6 = 11 \times 0 = 0$</p> <p>c) -6, -3, 0, 3, 6</p>	2	4
23	<p>a) $\angle CAB = 60^\circ$</p> <p>b) $\angle ABD = 20^\circ$</p> <p>c) $\angle A = 110^\circ, \angle B = 70^\circ, \angle C = 70^\circ, \angle D = 110^\circ$</p>	1 1 2	4
24	<p>a) $\angle A = 60^\circ$</p> <p>b) $DE = 2\sqrt{3}$ cm</p> <p>c) Area = $10\sqrt{3}$ sq cm</p>	1 2 1	4
25	<p>a) $mean = \frac{total}{n} = \frac{423}{9} = 47$</p> <p>b) median = 5th number of { 42,43,44,45,47,48,48,52,54} = 47</p>	2 2	4
26			4

<p>27</p>			<p>4</p>
<p>28</p>	<p>a) one side = x , other side = $x+ 2$ b) $x^2+(x+2)^2=10^2$ c) The perpendicular sides are 6 cm and 8 cm</p>	<p>1 1 2</p>	<p>4</p>
<p>29</p>	<p>a) $P(1) =1-6+7 =2$ b) $P(x)-P(1) = x^2-6x+5$ c) $P(x) - P(1) = (x-1) (x-5)$</p>	<p>2 2</p>	<p>4</p>
<p>30</p>	<p>a) $4 \times 3 = 12$ pairs b) Probability that both numbers are even = $2/12 = 1/6$ c) Probability that one is even and the other is odd = $6/12 = 1/2$</p>	<p>1 2 1</p>	<p>4</p>
<p>31</p>	<p>a) 11 12 13 14 15 16 17 18 19 20 21 b) First and last number in the 10th line are 46 and 55 c) Sum = $10/2 (46+55) = 505$</p>	<p>2 2 1</p>	<p>5</p>
<p>32</p>	 <p>Height of the building after construction = 15 m</p>	<p>2 3</p>	<p>5</p>
<p>33</p>	<p>a) 12 sq cm</p>	<p>2 3</p>	<p>5</p>

<p>34</p>	<p>a) $\angle AOB = 120^\circ$ b) $\angle ACB = 60^\circ$ c) $\angle PAB = 60^\circ$ d) $PA = PB = AB = 7 \text{ cm}$</p>	<p>2 1 1 1</p>	<p>5</p>
<p>35</p>	<p>a) b) Area of triangle ABC = 12 sq units</p>	<p>2 3</p>	<p>5</p>
<p>36</p>	<p>a) $V = \frac{1}{3} \pi 2^2 \times 8 = \frac{32\pi}{3} \text{ cm}^3$ b) $\frac{4}{3} \pi r^3 = \frac{32\pi}{3}$ $r^3 = 8$ $r = 2 \text{ cm}$</p>	<p>2 3</p>	<p>5</p>
<p>37</p>	<p>a) $\angle B = 45^\circ$</p>	<p>1</p>	

	<p>b) 4 cm</p> <p>c) Area of triangle ABC = $\frac{1}{2} \times 4 \times (4 + 4\sqrt{3}) = 8(1 + \sqrt{3}) \text{ cm}^2$</p>	<p>2</p> <p>2</p>	<p>5</p>
38	<p>a) $x_{17} = 50 + \frac{1}{2} = 50.5$</p> <p>b) $x_{20} = 50.5 + 3 = 53.5$</p>	<p>2</p> <p>3</p>	<p>5</p>
39	<p>a) 2</p> <p>b) $S_n = n^2 + 2n$</p> <p>c) $n^2 + 2n = 224$ $(n+1)^2 = 225$ $n = 15$</p>	<p>1</p> <p>1</p> <p>3</p>	<p>5</p>
40	<p>a) $C\left(\frac{2+8}{2}, \frac{4+10}{2}\right) = C(5,7)$</p> <p>b) radius = $\sqrt{3^2 + 3^2} = \sqrt{18}$</p> <p>c) $CD = \sqrt{3^2 + (-3)^2} = \sqrt{18}$, Yes D is a point on the circle.</p>	<p>2</p> <p>2</p> <p>1</p>	<p>5</p>
41			<p>5</p>
42	<p>a) $l = 12 \text{ cm}$</p> <p>b) $r = \frac{120}{360} \times 12 = 4 \text{ cm}$</p> <p>c) $CSA = \pi r l = \pi \times 4 \times 12 = 48 \pi \text{ cm}^2$</p>	<p>1</p> <p>2</p> <p>2</p>	<p>5</p>
43	<p>a) $PB = 9 \text{ cm}$</p>	<p>1</p>	

	<p>b) $PA = 4 \text{ cm} ; PB = 9 \text{ cm} ; PC = x ; PD = x + 9$ $PC \times PD = PA \times PB$ $x(x+9) = 4 \times 9$ $x^2 + 9x - 36 = 0$ $(x+12)(x-3) = 0$ $x = -12, 3$ $PC = 3 \text{ cm} \quad PD = 12 \text{ cm}$</p>	4	5
44	<p>a) $\angle ABC = 20^\circ$ b) $\angle BAC = 35^\circ$ c) $\angle A = 70^\circ ; \angle B = 55^\circ ; \angle O = 110^\circ ; \angle C = 125^\circ$</p>	1 1 3	5
45	<p>a) $BP = 2 \text{ cm}$ b) $CR = 3 \text{ cm}$ c) <i>perimeter of triangle ABC = 16 cm</i> d) $AR = \frac{1}{2} \times 16 = 8 \text{ cm}$ e) $AR = \frac{1}{2} \times 20 = 10 \text{ cm}$</p>	1 1 1 1 1	5

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