**Sample Answer Key**

**PART II Show all workings**

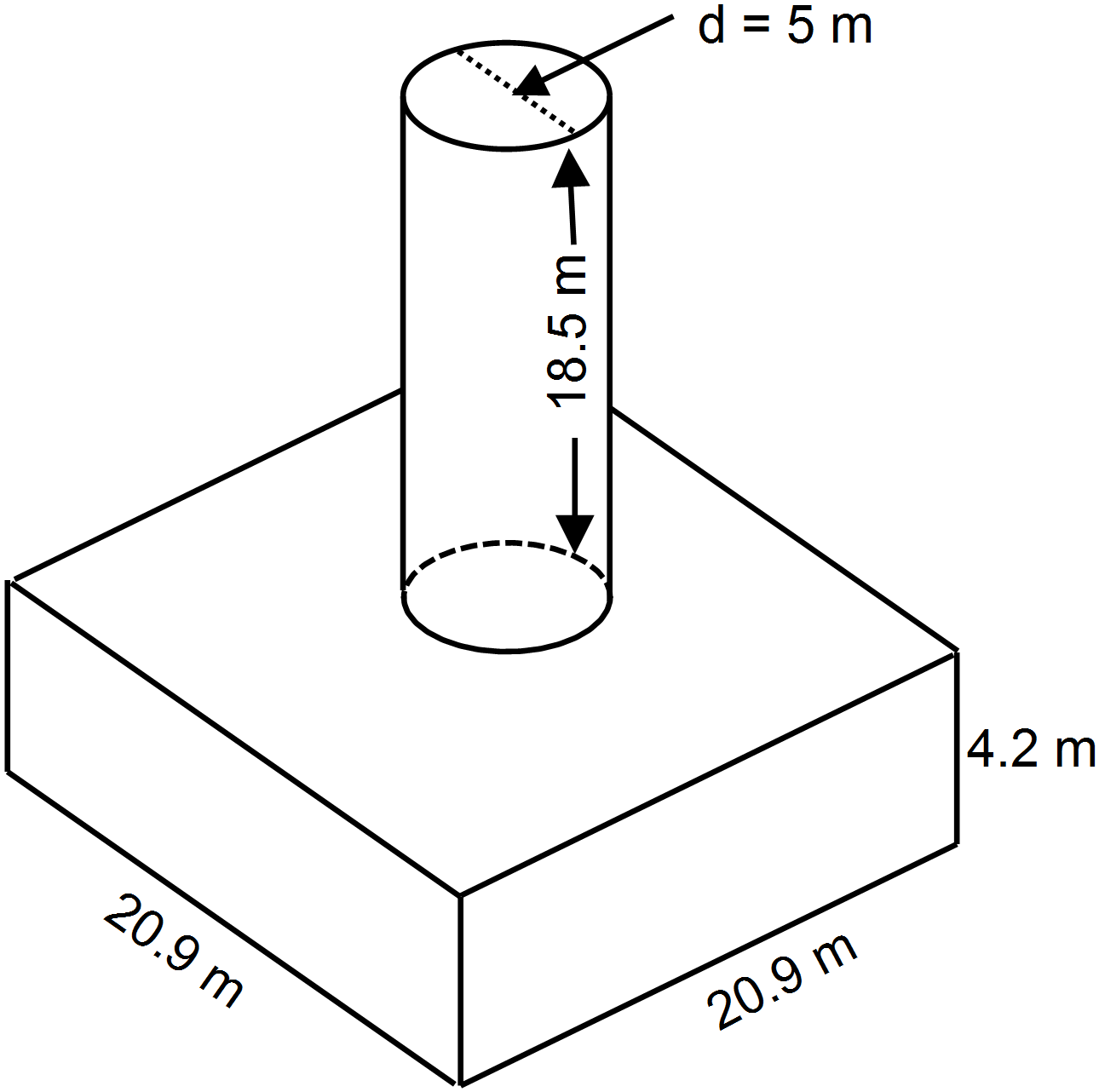
**Total Value: 35 marks**

value

4 36. The composite figure is made from a cylinder and square-based prism. What is the total surface area of the figure, including the bottom?

Surface Area of a Cylinder =

**OR**



**Cylinder 1 mark**

**Prism 1.5 marks**

Top/Bottom

Left Side/Right Side

Front/Back

**Total**

**Area of Overlap 0.5 mark**

**Total Surface Area 1 mark**

**Note:** Some students may readily see that there is no need to find the top and bottom of the cylinder as 2 circles cancel out the overlap.

3 37. Simplify using the laws of exponents and then evaluate:

1 mark

0.5 mark

1 mark

0.5 mark

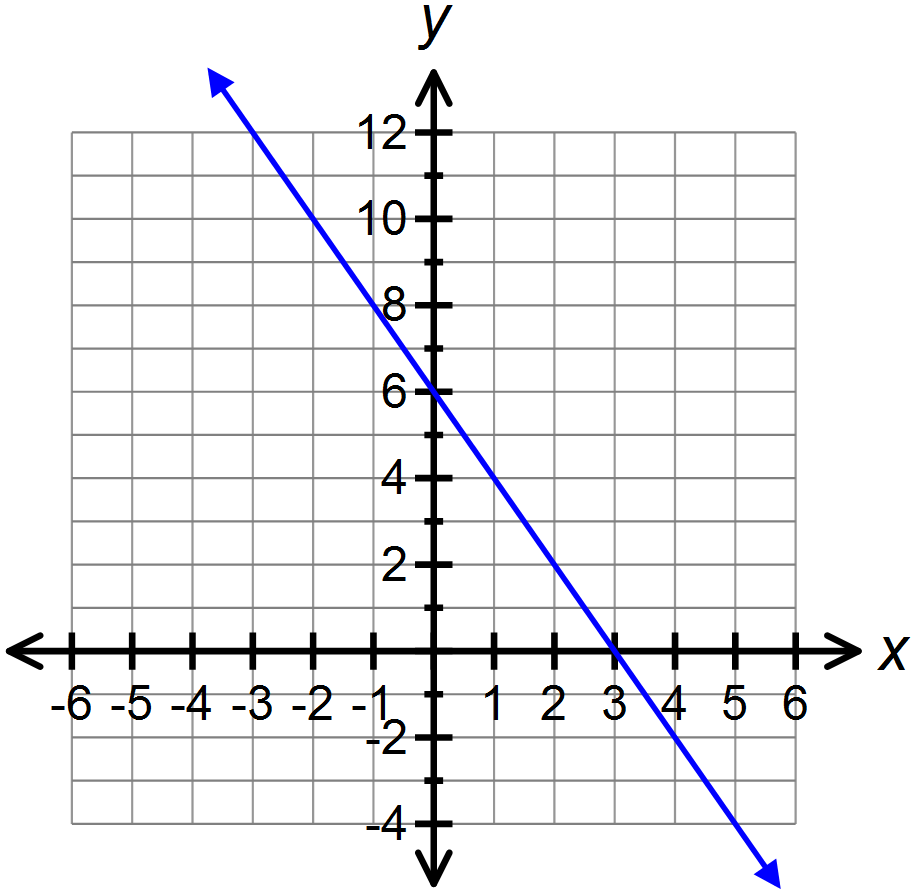
3 38. Evaluate: Show all workings in fractional form.

|  |
| --- |
| 1 mark  1 mark    1 mark |

3 39. Evaluate: Show all steps.

|  |
| --- |
| 1 mark  1 mark  1 mark |

2 40. Complete the table and graph



|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | |  |  | | **-2** | 10 | | **-1** | 8 | | **0** | 6 | | **1** | 4 | | **2** | 2 | |  |

41. An amusement park charges an entry fee of $10 and $2 per ride.

1 A) Complete the table

|  |  |
| --- | --- |
| **# Rides (*R*)** | **Cost ($)**  **(*C*)** |
| **0** | **10** |
| **1** | **12** |
| **2** | **14** |
| **3** | **16** |
| **4** | **18** |
| **5** | **20** |

1 B) Write the equation that relates the cost (***C***) to the number of rides (***R***).

1 C) How many rides can a person go on if they have $26? Justify your answer.

8 Rides Students might extend the table, construct graph, or use inspection

1 D) Is this an example of continuous or discrete data. Explain your answer.

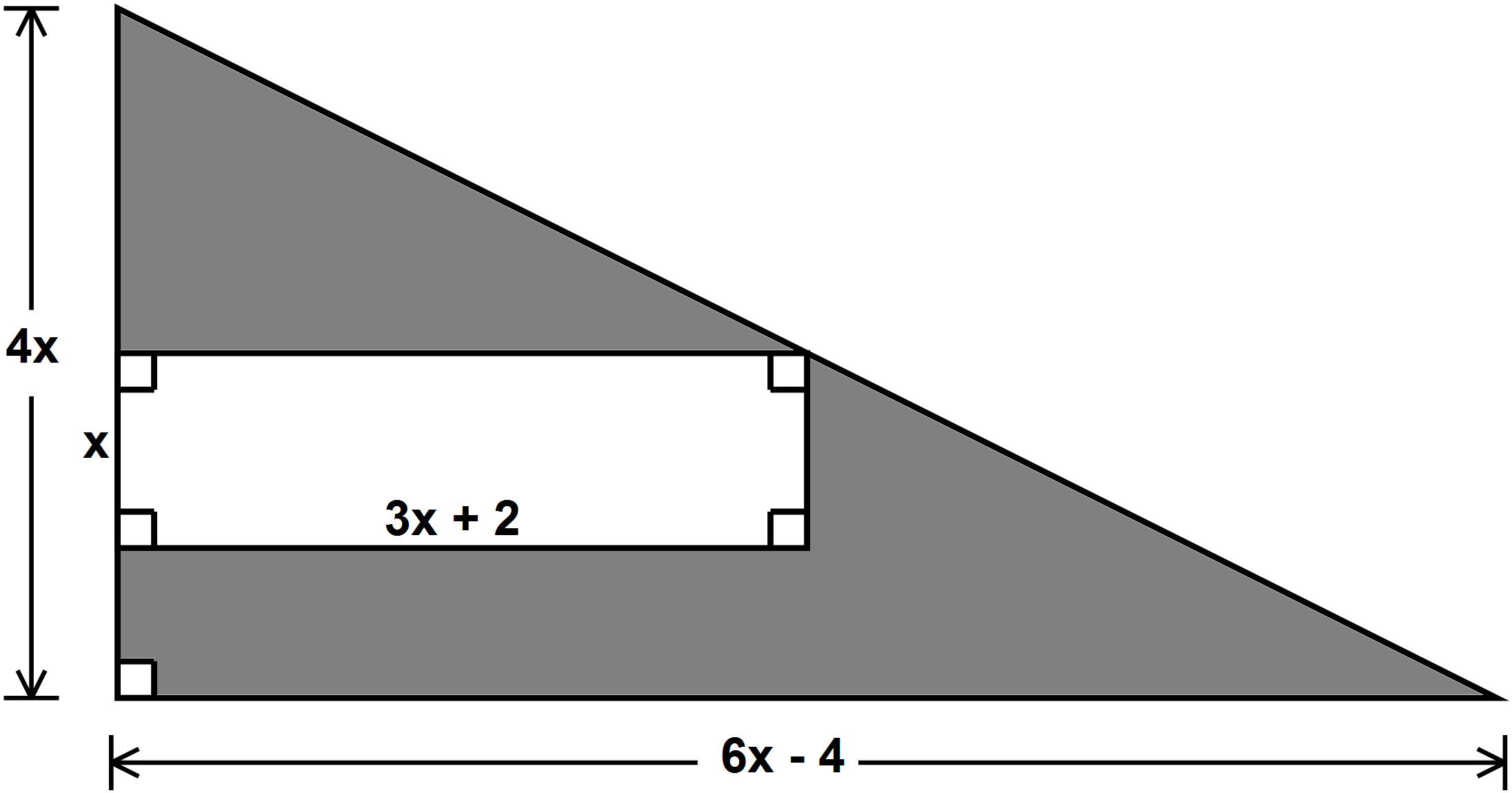
This is **Discrete Data** because a person cannot go on a part of a ride.

3 42. Determine the algebraic expression that represents the shaded region. Simplify your answer.

1 mark

1 mark

1 mark



43. Debbie incorrectly solved the following problem:

Step 1

Step 2

Step 3

Step 4

Step 5

1 a) In which step did Debbie’s error occur?

The error occurred in Step \_\_\_\_\_\_\_1\_\_\_\_\_\_\_\_

Explanation: Debbie did not apply the distributive property correctly in Step 1. She did

not multiply the 4 by the second term of the binomial.

1 b) Solve the equation correctly.

**OR**

44. John downloads apps from two online stores. The rate plans are shown in the table.

|  |  |  |
| --- | --- | --- |
|  | **iApps** | **Galaxy Apps** |
| Membership fee |  |  |
| Cost per app |  |  |
| Expression |  |  |

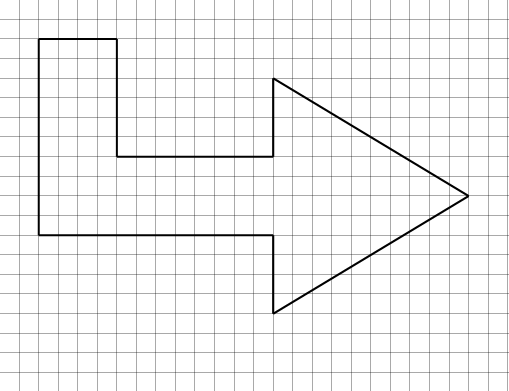
3 Write and solve an inequality to determine when the number of iApp downloads costs more than Galaxy Apps downloads.

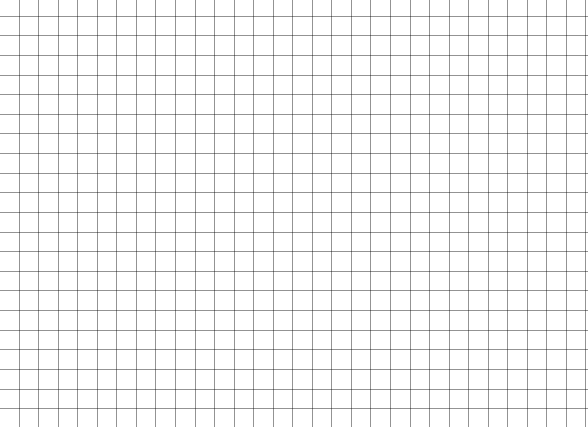
1 mark

1 mark

\*\*\*\*After 20 downloads, iApps will cost more. 1 mark

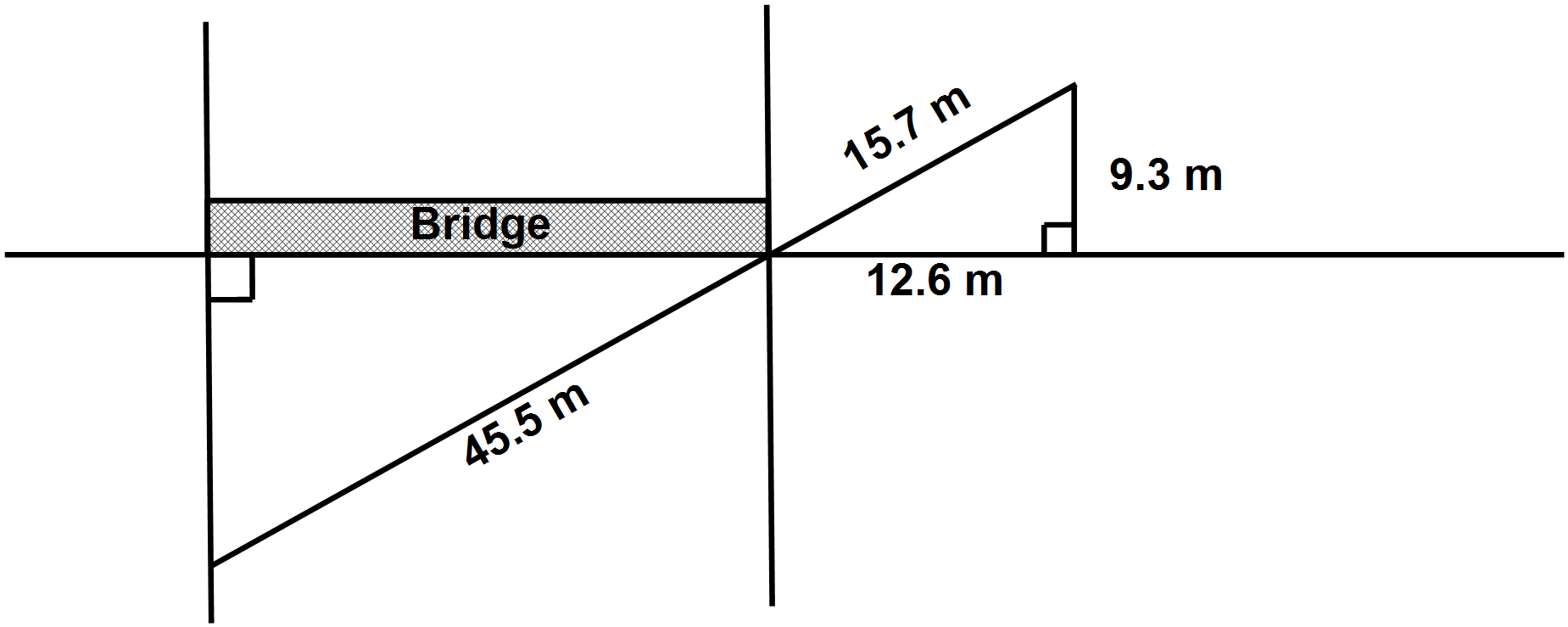
2 45. Draw a reduction of the figure using a scale factor of ?





3 46. Both triangles are similar. How long is the bridge?

Let = length of bridge



1 mark

1 mark

1 mark

The bridge is metres long.



3 47. Point is the centre of a circle with radius of . If , what is the length of tangent , to the nearest tenth?

* Indicate that a tangent and radius at point of tangency is a perpendicular bisector or forms a right angle.

**[0.5 mark]**

* Finding the value of RQ

0.5 mark

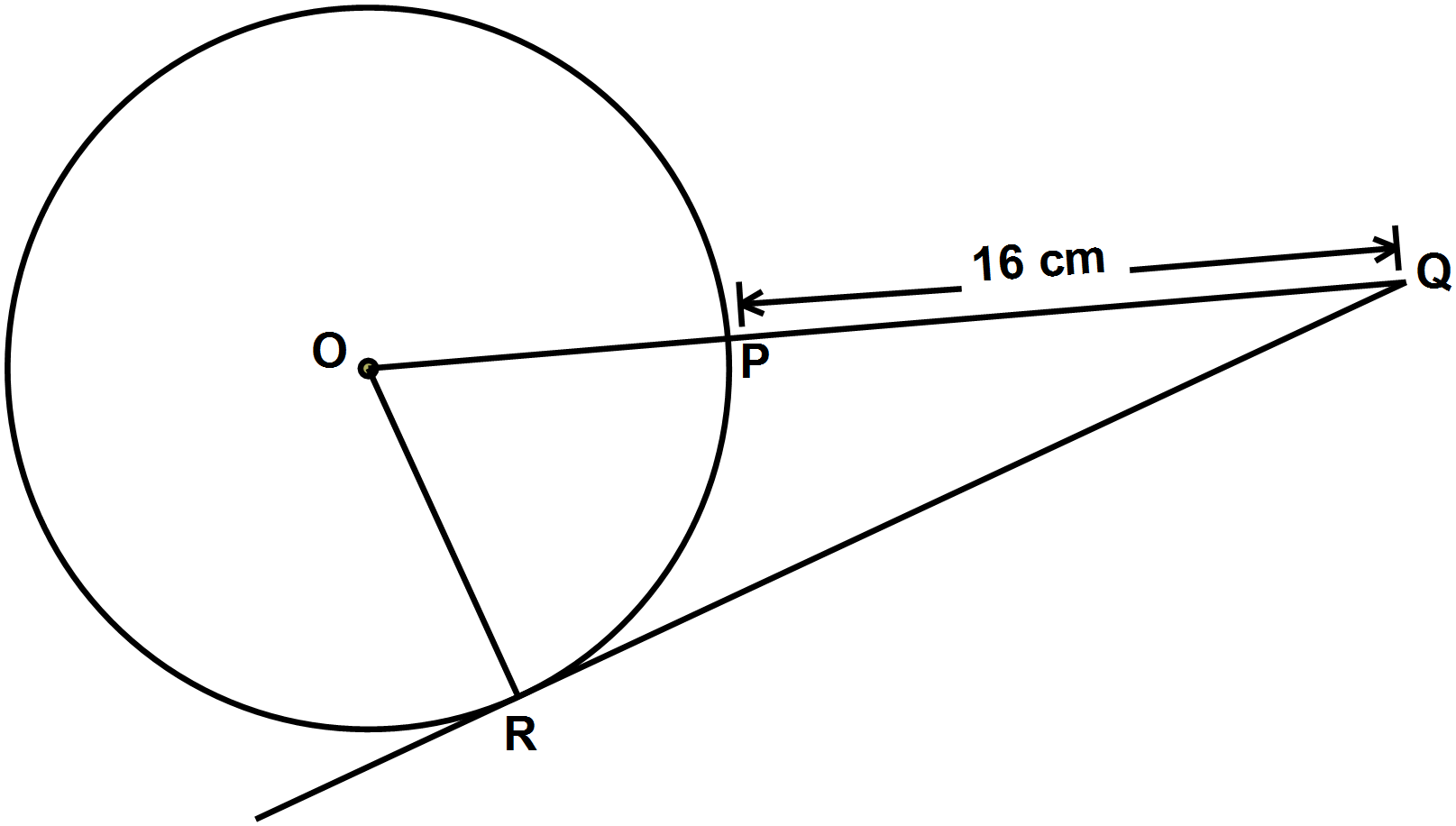
0.5 mark

0.5 mark

0.5 mark

0.5 mark

If the hypotenuse is marked as 16 cm rather than 23 cm, deduct 0.5 marks.



**Grade 9 Math Multiple Choice Answer Sheet**

**(This sheet may be removed from the exam paper.)**

**Teacher: Answer Key Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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

|  |
| --- |
| 21. A |
| 22. C |
| 23. B |
| 24. B |
| 25. B |
| 26. B |
| 27. B |
| 28. C |
| 29. B |
| 30. A |
| 31. B |
| 32. D |
| 33. C |
| 34. C |
| 35. B |