Multiple-choice section

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Question | 1 | 2 | 3 | 4 |
| Answer | C | A | B | A |

Question 1 [11.1]

C

5.3 = ,  = 11 = , ,  = 5 =  are all rational.

Question 2 [11.1]

A

 is between  and , so  is between 3 and 4.

Question 3 [11.2]

B

 = 

=  × 

= 3

Question 4 [11.2]

A

Collecting like terms, 11 − 6 = 5

Multiple-choice total marks: 4

Short answer section

Question 5 2 marks [11.1]

 is an example of a surd or an irrational number.

Question 6 3 marks [11.3]

 + 4

= **** +4 × ****

= 3**** +4 × ****

Question 7 4 marks [11.4]

(4+ )

= 4**** + ****

= 4 × 3+ 

= 12 + 3****

Question 8 5 marks [11.2]

|  |  |
| --- | --- |
| **(a)**  =  ×  = |  |

Question 9 6 marks [11.5]

|  |  |
| --- | --- |
| (a)  =  = 3 | (b)  =  ×  = 3 |

Short answer total marks: 20

Extended answer section

Question 10 6 marks [11.2, 11.3]

**(a)** *C* = 2πr  
= 2 ×   
= 2 mm

**(b)** Perimeter  
= 2 + 7 + 5 +  + 10 – 5  
= (7– 4 + 17) m

Extended answer total marks: 6

TOTAL test marks: 30