203: Electrical installations technology  
**Worksheet 14: Trunking systems**

**Answer guide**

Try the following problems.

1. **State three advantages of steel trunking.**

Select three from:

**affords conductors good mechanical protection**

**can accommodate many cables of different sizes**

**permits easy rewiring**

**minimises fire risks**

**can be utilised as the circuit protective conductor.**

1. **State three disadvantages of steel trunking.**

Select three from:

**expensive compared with some other systems**

**requires skill to fabricate and install**

**difficult to make it gas- and water-proof**

**liable to corrosion when subject to acid, alkali and other fumes.**

1. **The following PVC (BS6004) cables are to be installed into trunking using stranded cable:**
2. **6 x 1.5mm, 9 x 2.5mm, 3 x 6mm**

**6 x 8.6 = 51.6, 9 x 12.6 = 113.4, 3 x 21.2 = 63.6**

**51.6 + 113.4 + 63.6 = 228.6 75mm x 25mm Trunking**

1. **21 x 1.5mm, 12 x 2.5mm 30 x 6mm**

**21 x 8.6 = 180.6, 12 x 12.6 = 151.2, 30 x 21.2 = 967.8**

**180.6 + 151.2 + 636 = 967.8 100mm x 25mm Trunking**

1. **40 x 1.5mm, 15 x 2.5mm, 30 x 10mm**

**40 x 8.6 = 344, 15 x 12.6 = 189, 30 x 35.3 = 1592**

**344 + 189 + 1059 = 1592 100mm x 50mm Trunking**

1. **85 x 6mm, 60 x 10mm, 33 x 16mm**

**85 x 21.2 = 344, 60 x 35.3 = 189, 33 x 47.8 = 5497.4**

**1802 + 2118 + 1577.4 = 5497.4 300mm x 50mm Trunking**

1. **50 x50mm trunking can have a maximum of how many 1.5mm cables**

**1037 / 8.6 = 120.58**

**50mm x 50mm Trunking can have a maximum of 120 x 1.5mm cables**

1. **100 x 100mm trunking can have a maximum of how many 2.5mm cables**

**4252 / 12.6 = 337.48**

**100mm x 100mm Trunking can have a maximum of 337 x 2.5mm cables**

1. **100mm x 75mm trunking has 180 x 1.5mm & 210 x 2.5mm cables is this acceptable?**

**180 x 8.6 = 1548, 210 x 12.6 = 2646**

**1548 + 2646 = 4194 NO, 100mm x 75mm Trunking will has a maximum factor of 3189**

**Correct size to use is 100mm x 100mm**

1. **The following PVC (BS6004) cables are to be installed into trunking:**
2. **x solid core 1.5mm, 12 x solid core 2.5mm2**
3. **x stranded 4mm, 10 x stranded 6mm, 9 x stranded 10mm, 3 x stranded 25mm**

**15 x 8.0 = 120, 12 x 11.9 = 142.8, 18 x 16.6 = 298.8, 10 x 21.2 = 212, 9 x 35.3 = 317.7, 3 x 73.9 = 221.7**

**120 + 142.8 + 298.8 + 212 + 317.7 + 221.7 = 1313 100mm x 38mm Trunking**

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