|  |
| --- |
| **Problem 33.42** |
| A long wire carrying a 5.0 A current perpendicular to the *xy*-plane intersects the *x*-axis at x\,=\: -\, 2.0\;{\rm cm} . A second, parallel wire carrying a 3.0 A current intersects the *x*-axis at x\,=\:+\; 2.0\;{\rm cm} .

|  |  |
| --- | --- |
| Part A |  |
| At what point on the *x*-axis is the magnetic field zero if the two currents are in the same direction?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ANSWER: |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |   x = | ***Answer not displayed*** |  m |  |

 |

 |
| Part B |  |
| At what point on the *x*-axis is the magnetic field zero if the two currents are in opposite directions?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ANSWER: |

|  |  |  |  |
| --- | --- | --- | --- |
|  |   x = | ***Answer not displayed*** |  m |

 |

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| --- |
| **Problem 33.6** |
|

|  |  |
| --- | --- |
| Part A |  |
| What is the magnetic field strength at the dot in the figure? http://session.masteringphysics.com/problemAsset/1074669/3/33.Ex06.jpg**Express your answer using two significant figures.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ANSWER: |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |   B = | **2.8×10−16*****Correct***  |   {\rm T} |  |

 |

 |
| Part B |  |
| What is the magnetic field strength at the dot in the figure?

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ANSWER: |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |

|  |  |
| --- | --- |
|  | to the left |
|  | to the right |
|  | into the page |
|  | out of the page |
|  | another direction |

 |  | ***Answer not displayed*** |

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