

## Problem Set 10

### Physics, summer 2020/21

- 1) **(2p.)** What is the current involved when a truck battery sets in motion 720 C of charge in 4.00 s while starting an engine?
- 2) **(2p)** How long does it take 1.00 C of charge to flow through a handheld calculator if a 0.300 mA current is flowing?
- 3) **(2p.)** What is the resistance of an automobile headlight through which 2.50 A flows when 12.0 V is applied to it?
- 4) **(3p.)** A car headlight filament is made of tungsten and has a cold resistance of 0.350  $\Omega$ . If the filament is a cylinder 4.00 cm long (it may be coiled to save space), what is its diameter?

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