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Ch 4.1 - Page 124 - Practice Problems A – Drawing Free Body Diagrams

1. A truck pulls a trailer on a flat stretch of road. The forces acting on the trailer are the forces due to gravity (250,000 N downward), the force exerted by the road (250,000 N upward), and the force exerted by the cable connecting the trailer to the truck (20,000 N to the right). The forces acting on the truck are the force due to gravity (80,000 N to the downward), the force exerted on the cable (20,000 N to the left) and the force causing the truck to move forward (26,400 to the right).
2. Draw and label a free- body diagram on the trailer.
3. Draw and label a free-body diagram on the truck.
4. A physics book is at rest on a desk. Gravitational force pulls the book down. The desk exerts an upward force on the book that is equal in magnitude to the gravitational force. Draw a free body diagram of the book.