

GROWING AGRICULTURE *together.*

Name: _____

ENGINE OILS

Engine oils are used for lubrication in internal combustion engines, the engines found in motor vehicles. Without using lubricants for general upkeep, we would be living in a world with constant breakdowns. Fortunately, lubricants are able to extend the life of equipment all around the world keeping factories, cooperatives, and machines operating.

DO THE MATH: FIGURE THE OIL CHANGES

- 1** | As a semi-truck driver, you know that your truck requires regular maintenance with frequent oil changes to keep going. Experts recommend changing your oil every 25,000 miles. The engines inside a semi truck can hold 10 gallons of oil. At the truck lube service station, they store the oil in a 55 gallon oil drum. How many gallons of oil will be left in the oil drum, after they service your semi-truck with an oil change? Show your work.

Answer : _____

- 2** | As an owner of a minivan, you prefer to do the general upkeep on the vehicle yourself, including changing its oil. The engine inside a minivan can hold 6 quarts of synthetic oil. You will need to purchase several supplies before you can change the oil including a filter, drain pan and wrench. How much money will you spend on changing the oil? Show your work.

Supplies	Cost
Oil Filter	\$9.49
1 quart of regular oil	\$4.49
5 quarts of regular oil	\$18.99
1 quart of synthetic oil	\$6.49
5 quarts of synthetic oil	\$27.99
Oil drain pan	\$9.49
Oil filter wrench	\$8.49

Answer : _____

- 3** | As the owner of a landscape business, taking proper care of the lawn mowers helps the machines run well for years to come. Engine oil and oil filters should be replaced at least every 50 hours of use. During one season, a single lawn mower may be used for 800 hours. How many oil changes will that lawn mower need to keep well maintained? Show your work.

Answer : _____



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Answer : **45 gallons**

2 | As an owner of a minivan, you prefer to do the general upkeep on the vehicle yourself, including changing its oil. The engine inside a minivan can hold 6 quarts of synthetic oil. You will need to purchase several supplies before you can change the oil including a filter, drain pan and wrench. How much money will you spend on changing the oil? Show your work.

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Answer : **\$61.95**

3 | As the owner of a landscape business, taking proper care of the lawn mowers helps the machines run well for years to come. Engine oil and oil filters should be replaced at least every 50 hours of use. During one season, a single lawn mower may be used for 800 hours. How many oil changes will that lawn mower need to keep well maintained? Show your work.

Answer : **16 oil changes**

