

STEM *Sims*™

Supply Line



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**Do you need an idea for a scientific study?
Try out one of our ideas or make one of your own.**

Start learning right now about how people prepare for natural and human-made disasters. Take the following brief quiz to see how much you already know about emergency preparation. See the bottom of page 4 to check your answers.

1. According to 2010 data, about how many gallons of gasoline does an average gas station sell each day?
 - a. 400 gallons
 - b. 4,000 gallons
 - c. 40,000 gallons
 - d. 400,000 gallons
2. According to 2010 data, what is an average gas station's gross profit per gallon on the gasoline the station sells?
 - a. \$0.16 per gallon
 - b. \$0.96 per gallon
 - c. \$1.82 per gallon
 - d. \$2.41 per gallon
3. About how many United States petroleum refineries are currently in operation?
 - a. 18
 - b. 148
 - c. 1,268
 - d. 11,732
4. According to 2010 data, how many total miles did Americans travel by car during that year?
 - a. 82 million
 - b. 850 million
 - c. 8.2 billion
 - d. 82 billion
5. About how many gasoline fill-ups (assuming a 9-gallon average fill-up) are made in the United States each day?
 - a. 42,000
 - b. 420,000
 - c. 4,200,000
 - d. 42,000,000



Got a Match?

See if you can match the quantities in the right-hand column with the correct phrase in the left-hand column. Watch out for the units specified in the left-hand column. See the bottom of page 4 to check your answers.

- | | |
|--|----------|
| 1. U.S. Domestic oil production in 2010
(in millions of barrels) | a. 0.001 |
| 2. Expected U.S. Domestic oil production in 2012
(in millions of barrels) | b. 0.24 |
| 3. U.S. domestic ethanol production in 2011
(in millions of barrels) | c. 0.91 |
| 4. Oil imported into U.S. in 2010
(in percentage of total oil used) | d. 1.09 |
| 5. Oil imported into U.S. in 2010 from Canada
(in millions of barrels) | e. 2.54 |
| 6. Oil imported into U.S. in 2010 from Saudi Arabia
(in millions of barrels) | f. 5.36 |
| 7. Oil imported into U.S. in 2010 from Persian Gulf
(in percentage of total oil imported) | g. 5.51 |
| 8. Oil used in U.S. on highest demand day in 2010
(in millions of barrels) | h. 8.63 |
| 9. Oil used in U.S. on lowest demand day in 2010
(in millions of barrels) | i. 9.41 |
| 10. Number of gallons of oil in one barrel of oil | j. 10 |
| | k. 15 |
| | l. 30 |
| | m. 42 |
| | n. 55 |
| | o. 63 |
| | p. 78 |
| | q. 89 |
| | r. 97 |



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Fill-er-up Protection

During the mid-1970's a worldwide oil embargo reduced the amount of petroleum imported to the United States. This caused a gasoline shortage and skyrocketed the price of gasoline that consumers paid. In response to this crisis, the U.S. government created a stockpile of petroleum it could use if another such action occurred. This oil stockpile is called the Strategic Petroleum Reserve (SPR). The government stores vast quantities of oil in underground caverns in Texas, Louisiana, and Mississippi.

Today around 727 million barrels of oil are stored in the SPR. That sounds like a lot of gasoline; however, Americans use about 9 million barrels of gasoline each day. That means that the total reserves would only supply America's gasoline needs for about 75 days! After that, the country would be out of gasoline. Imagine how your life would be different if the service station pumps ran dry. It would take about two weeks from the time the government ordered the tapping of the SPR until the gasoline from the reserve started flowing at the pumps.



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Page 2 Answers: (1) b, (2) a, (3) b, (4) c, (5) d. Page 3 Got a Match Answers: (1) g, (2) f, (3) c, (4) o, (5) e, (6) d, (7) k, (8) i, (9) h, (10) m

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