

## 5.10 Notes: Computing the Fuel Needed (Pg. 127)

Under the picture, you will find three factors that affect gas mileage of a car:

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1. John is planning a 362-mile trip. His car's EPA rating is 18mpg on the highway. How many gallons of gas will he require for this trip? **Round UP to the next whole number!!!**

**What Step Did You Take To Find Fuel Needed?**

2. Find the amount of fuel needed for each trip. **Round your answer UP to the next whole number.**

Distance	Mileage Rating	Amount of Fuel
150 miles	20 mpg	
370 miles	27 mpg	
896 miles	35 mpg	
1,040 miles	40 mpg	
4,488 miles	44 mpg	
204 miles	60 mpg	

## 5.13 Notes: Buying Gasoline (Pgs. 130-131)

- Jennifer needs to buy 16 gallons of gasoline to fill her tank. Right now, gas is priced at  $\$2.37^9$ . How much will it cost her to completely fill up her tank? Round your answers UP to the next cent (remember we're working with money). \* $\$2.37^9$  means  $\$2.379^*$
- Find the cost for each of these gasoline purchases. Round your answers UP to the next cent (remember we're working with money).

Gallons	Cost Per Gallon	Total Cost
17	$\$3.37^9$	
19	$\$2.48^9$	
21	$\$2.56^9$	
18	$\$3.43^9$	
20	$\$2.55^9$	
22	$\$3.67^9$	

- Rachel needs to buy 17 gallons of gas. The cash price is  $\$2.29^9$  per gallon and the price for paying with a credit or debit card is  $\$2.36^9$  per gallon. How much would she save by paying with cash? \*Look at the example in the book\*
- Find the amount each customer saved by paying with cash.

Card Price	Cash Price	Units	Savings
$\$2.67^9$	$\$2.59^9$	20 gal	
$\$2.89^9$	$\$2.77^9$	19 gal	
$\$2.45^9$	$\$2.42^9$	10 gal	
$\$2.37^9$	$\$2.32^9$	14 gal	

## Computing the Fuel Needed

**EXAMPLE**

Twanda is planning a 320 mile trip. Her car's EPA rating is 41 mpg on the highway. How many gallons of gas will she require for this trip? Round to the nearest gallon.

$$\begin{array}{r} 7.8 \\ 41 \overline{) 320.0} \end{array} \quad \sim 8 \text{ gallons needed for the trip}$$

Miles

Twanda will need about 8 gallons of gas for this trip.

**Directions** Find the amount of fuel needed for each trip. Round your answer to the nearest gallon.

	Distance	Mileage Rating	Amount of Fuel
1.	253 miles	22 mpg	_____
2.	119 miles	25 mpg	_____
3.	610 miles	18 mpg	_____
4.	784 miles	32 mpg	_____
5.	223 miles	18 mpg	_____
6.	483 miles	25 mpg	_____
7.	2,194 miles	35 mpg	_____
8.	244 miles	33 mpg	_____
9.	632 miles	29 mpg	_____
10.	2,048 miles	38 mpg	_____
11.	653 miles	28 mpg	_____
12.	2,639 miles	26 mpg	_____
13.	877 miles	39 mpg	_____
14.	902 miles	44 mpg	_____
15.	1,763 miles	42 mpg	_____
16.	3,779 miles	31 mpg	_____
17.	3,992 miles	25 mpg	_____
18.	14,329 miles	41 mpg	_____
19.	296 miles	34 mpg	_____
20.	118 miles	14 mpg	_____

**Worksheet 5.13**

1. Tyuane needs to buy 25 gallons of gasoline to fill his tank. Right now, gas is priced at \$2.23<sup>9</sup>. How much will it cost him to completely fill up his tank? **Round UP to the next cent.**
2. Frank needs to buy 19 gallons of gasoline to fill his tank. Right now, gas is priced at \$3.26<sup>9</sup>. How much will it cost him to completely fill up his tank? **Round UP to the next cent.**
3. Find the cost for each of these gasoline purchases. **Round UP to the next cent.**

Gallons	Cost Per Gallon	Total Cost
14	\$2.87 <sup>9</sup>	
7	\$3.41 <sup>9</sup>	
15	\$2.58 <sup>9</sup>	
18	\$2.35 <sup>9</sup>	
21	\$3.15 <sup>9</sup>	
16	\$2.08 <sup>9</sup>	

4. Erik needs to buy 13 gallons of gas. The cash price is \$2.08<sup>9</sup> per gallon and the price for paying with a credit or debit card is \$2.15<sup>9</sup> per gallon. How much would he save by paying with cash?
5. Brandon needs 8 gallons of gas. The cash price is \$2.23<sup>9</sup> per gallon and the price for paying with a credit or debit card is \$2.28<sup>9</sup> per gallon. How much would he save by paying with cash?
6. Find the amount each customer saved by paying with cash.

Card Price	Cash Price	Units	Savings
\$2.17 <sup>9</sup>	\$2.15 <sup>9</sup>	16 gal	
\$2.29 <sup>9</sup>	\$2.19 <sup>9</sup>	24 gal	
\$2.56 <sup>9</sup>	\$2.50 <sup>9</sup>	15 gal	
\$2.40 <sup>9</sup>	\$2.26 <sup>9</sup>	13 gal	
\$3.04 <sup>9</sup>	\$2.93 <sup>9</sup>	10 gal	
\$2.66 <sup>9</sup>	\$2.64 <sup>9</sup>	22 gal	

Name:

Date:

**Find the total sticker price. (5.1)**

1. Price = \_\_\_\_\_

Hatchback 3-door	\$23,683
Floor mats	208
Console	178
Automatic transmission	800
Wheel locks	59
Fog lights	289
Rear window defroster	115
Air conditioning	900
CD player	349
Splash guards	89
Tinted glass	82
Transportation/Handling	445

Price = \_\_\_\_\_

Station Wagon	\$24,294
Luggage rack	215
Remote control mirror	115
Fog lights	289
6-cylinder engine	315
2-way lift gate	105
Rear window defroster	124
Air conditioning	1,099
Radio: AM/FM stereo with cassette	219
Tinted glass	88
Power windows and door locks	570
Transportation/Handling	508

2. Which is cheaper, the Hatchback or the Station Wagon? How much cheaper is it?

**Find the cost of the used car. (5.2)**

3. The "Used But Not Abused" car lot is having a big sale. A two-year old car that had been \$19,738 is now sale priced at \$14,241. How much money can be saved by buying this car on sale?
  
4. The trade-in value of Joe's car is \$3,496. If he wants a car worth \$14,895, find his cash price with the trade-in.
  
5. Sue's Used Cars gives a trade-in discount of \$850 from or a cash rebate of \$475. If Megan wants a car worth \$7,386, find the cost of the car with each discount separately.
  - a. With trade-in:
  
  - b. With cash rebate:

**Find the costs of financing a car. (5.3)**

6. Find the monthly payment total, deferred price, and interest paid when financing each of these cars.

Cash Price	Down Payment	Monthly Payment	# Months	Monthly Payment Total	Deferred Price	Interest Paid
\$28,000	\$5,000	\$486.48	72			
\$16,000	\$4,000	\$352.15	60			

**Find the cost of automobile insurance. (5.4)**

Annual Liability Insurance Premiums								
Personal Injury					Property Damage			
Area	10/20	20/40	40/80	75/150	5	10	25	50
High risk	\$210	\$470	\$610	\$835	\$72	\$84	\$99	\$148
Average	\$167	\$339	\$470	\$620	\$56	\$69	\$77	\$98
Low risk	\$140	\$229	\$340	\$489	\$48	\$52	\$61	\$73

7. Use the table above to find the premiums due.
- What is the premium due for a 75/150/25 policy in a high risk area?
  - Find the premium for a 20/40/5 policy in an average risk area.
8. Because Jessica has good grades in school, she earns a "good student discount." After finding her premium, the insurance agent multiplies her premium by the good student factor, 0.81, to find her actual cost. Jessica buys 75/150/25 coverage in a low risk area. Find her premium.
9. Barry is 18 years old, lives in a high risk area, and wants 10/20/10 coverage. Because young males have the highest rate of accidents, he will be charged a 1.78 factor on his policy. Find his premium.

**Find the average miles driven. (5.6)**

11. Charlotte's odometer reads 63,143.6 miles. Her car is five years old. On the average, how many miles does Charlotte drive each year? Round to the next WHOLE NUMBER.
12. If Jennifer's Car is six years old, and her odometer reads 113,234.4 miles. On the average, how many miles does Jennifer drive each year? Round to the next WHOLE NUMBER.

**Find the miles traveled. (5.7)**

- |     | Beginning | End      |
|-----|-----------|----------|
| 13. | 99375.8   | 100305.9 |
| 14. | 10101.1   | 10192.6  |

**Find the gas mileage (mpg) for each trip. (5.8) Round up to the next whole number.**

	<b>Distance</b>	<b>Gas used</b>
15.	489 miles	12 gallons
16.	25 miles	1.2 gallons

17. Craig's car has an EPA rating of 18mpg in the city and 24 mpg on the highway. His tank holds 13 gallons. What are the city and highway ranges of his car? (5.9)

City Range:

Highway Range:

18. Find the amount of fuel needed for each trip. (5.10) Round up to the next whole number.

<b>Distance</b>	<b>Mileage Rating</b>	<b>Fuel Needed</b>
170 miles	20 mpg	
380 miles	27mpg	
866 miles	35mpg	

19. Jessica drives 450 miles in 7 hours and 36 minutes. What is her average speed in miles per hour? (5.11)

Time in Hours (round up to 2 decimal places):

Speed (round up to next whole number):

20. Carlotta drives 280 miles in 4 hours and 46 minutes. What is her average speed in miles per hour? (5.11)

Time in Hours (round up to 2 decimal places):

Speed (round up to next whole number):

21. Joe plans a 525-mile trip .Because he and his family will travel on interstate highways for most of the trip, they hope to average 65mph. How long should they expect the trip to take? (5.12)

Time in Hours (round up to 2 decimal places):

Time in Hours & Minutes (round up to next whole number):

22. Kenny plans a 678-mile trip. Because will travel on interstate highways for most of the trip, he hopes to average 55mph. How long should they expect the trip to take? (5.12)

Time in Hours (round up to 2 decimal places):

Time in Hours & Minutes (round up to next whole number):

23. Find the cost of gasoline (5.13)

Tank Capacity	Gas Price
22gal	\$3.379
19gal	\$3.349
17gal	\$3.299

24. Find the savings of gasoline between paying with cash and paying with a credit card. (5.13)

Tank Capacity	Credit Card	Cash
21gal	\$3.389	\$3.279
19gal	\$3.359	\$3.319
17gal	\$3.279	\$3.209

**GIVE A FULL DESCRIPTION OF EACH VOCABULARY WORD**

Depreciate

Transportation and Handling

Rebate

Premium

EPA Rating

Range

Gas Mileage

MPH

Odometer

Liabile

Deferred Price