From textbook 1

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10. On average across all industries, full-time employed Canadians worked 39.5 hours per week. If the typical adult requires eight hours of sleep per day, what percentage of the hours in a single week are left over for personal activities?

14. Housing starts in Winnipeg for the first half of the 2009 year were down 46.733% from 2008, when 1,500 new homes were started. How many housing starts were there in 2009?

15. A local baseball team sells tickets with two price zones. Seats behind the plate from first base to third base are priced at $20 per ticket. All other seats down the base lines and in the outfield are priced at $10 per ticket. At last night's game, 5,332 fans were in attendance and total ticket revenue was $71,750. How many tickets in each zone were sold?

18. Francesca operates an online flower delivery business. She learned that in 2012 there were an estimated 324,000 online orders in her region, which represented a $\frac{1}{12}$ increase over the previous year. Her business received 22,350 online orders in 2012, which represented a $\frac{3}{14}$ increase over her previous year. In 2011, what percentage of online orders were placed with Francesca's business?

19. Goodyear Tires just completed a "Buy Three Get One Free" promotion on its ultra-grip SUV tires, regularly priced at $249.99 per tire. Over the course of the promotion, 1,405 tires were sold resulting in sales of $276,238.95. How many tires were sold at the regular price and how many tires were sold at the special promotional price?

20. The current price of $41.99 for a monthly cellphone rate plan is 105% of last year's rate plan. There are currently 34,543 subscribers to the plan, which is 98% of last year. Express the current total revenue as a percentage of last year's total revenue. Round the final answer to one decimal.

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4. If $9.99 is changed to $10.49, what is the percent change?

5. $19.99 lowered by 10% is what dollar amount?

6. What amount when increased by 40% is $3,500?

7. If 10,000 grows to 20,000 over a period of 10 years, what is the annual rate of change?

Applications

8. How much, including taxes of 12%, would you pay for an item with a retail price of $194.95?

9. From September 8, 2007 to November 7, 2007, the Canadian dollar experienced a rapid appreciation against the US dollar, going from $0.9482 to $1.1024. What was the percent increase in the Canadian dollar?

10. From 1996 to 2006, the "big three" automakers in North America (General Motors, Ford, and Chrysler) saw their market share drop from 71.5% to 52.7%. What is the overall change and the rate of change per year?

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15. Gabrielle is famous for her trail mix recipe. By weight, the recipe calls for 50% pretzels, 30% Cheerios, and 20% peanuts. She wants to make a 2 kg container of her mix. If pretzels cost $9.99/kg, Cheerios cost $6.99/kg, and peanuts cost $4.95/kg, what is the average cost per 100 g rounded to four decimals?

16. Caruso is the marketing manager for a local John Deere franchise. He needs to compare his average farm equipment sales against his local Case IH competitor's sales. In the past three months, his franchise has sold six $375,000 combines, eighteen $210,000 tractors, and fifteen $120,000 air seeders. His sales force estimates that the Case IH dealer has sold four $320,000 combines, twenty-four $225,000 tractors, and eleven $98,000 air seeders. Express the Case IH dealer's average sales as a percentage of the John Deere dealer's average sales.

Solar panel and battery
One option:
https://www.amazon.com/ROCKSOLAR-Portable-Power-Station-Foldable/dp/B09YB67212/ref=asc_df_B09YB67212/?tag=hyprod-20&linkCode=df0&hvadid=598229505786&hvpos=&hvnetw=g&hvrand=5044841420461620092&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=1025172&hvtargid=pla-1653303542579&psc=1

Cost: $245
Output 111 watt-hours

Average cost of 111 watt-hours: $0.015 (yes, that is 1.5 cents)

245/0.015 = 16,333 hours

If you use this to charge a laptop, phone, and lamp for 1000 days, the investment has paid for itself and you can consider the rest to be "free" electricity.

Wind turbine
One option:
https://www.amazon.com/dp/B08JGJJPD2?tag=conch-house-20&linkCode=osi&th=1&psc=1
Amazon.com: Pikasola Wind Turbine Generator Kit 400W 24V with 5 Blade, Wind Generator Kit with Charge Controller, Wind Power generator for Marine, RV, Home, Windmill Generator Suit for Hybrid Solar Wind System
Cost: $270
Output: Rated at 400 watts, but may only generate 40 watts in low wind conditions

May be able to generate 40 watts for 24 hours, so round up to 1 kilowatt hour per day
Remember that 1 kwh = about $0.15

270/0.15 = 1800 days (or almost 5 years) to pay for itself

If you live in a windy area and it produces a constant 400 watts, that's 9.6 kwh per day, valued at about $1.44 and it would take about 187 days (or half a year) to pay for itself.

And if you have enough wind and enough space, you can buy three of these and power your entire house (and after 6 months or so have no electric bill).