



**PROBLEM B**    **HOW MUCH ENERGY & MONEY DO NEW LIGHT BULBS SAVE?** Multiplication  
(Multiples of 10)

The table below shows how much electricity each light bulb uses to light your room in 1 year.



Type of light bulb	Electricity use (Watt hour (kWh))
Regular light bulb 	200
Energy saving Light bulb 	60

1. Your house has 30 light fixtures. How much electricity do you use during a year if you use a regular light bulb for each light fixture?
2. How much electricity do you use during a year if you use an energy saving light bulb for each house's light fixture?
3. How much electricity can you save if you replace all of the 30 regular light bulbs with energy saving light bulbs?
4. The average price of 1kwh-electricity in Indiana was 12 cents in 2018. How much money could your family save for electricity in a year if you replaced all of the 30 light bulbs with energy saving light bulbs in a year?



**PROBLEM B-2 HOW MUCH ENERGY & MONEY DO NEW LIGHT BULBS SAVE?** Multiplication  
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Type of light bulb	Electricity use (Watt hour (kWh))
Regular light bulb 	200
Energy saving Light bulb 	30

1. Your house has 30 light fixtures. How much electricity do you use during a year if you use a regular light bulb for each light fixture?
2. How much electricity do you use during a year if you use an energy saving light bulb for each house's light fixture?
3. How much electricity can you save if you replace all of the 30 regular light bulbs with energy saving light bulbs?
4. The average price of 1kwh-electricity in Indiana was 12 cents in 2018. How much money could your family save for electricity in a year if you replaced all of the 30 light bulbs with energy saving light bulbs in a year?



## Answer Key

The table below shows how much electricity each light bulb uses to light your room in 1 year.

Type of light bulb	Electricity use (Watt hour (kWh))
Regular light bulb 	200
Energy saving Light bulb 	60

1. Your house has 30 light fixtures. How much electricity do you use during a year if you use a regular light bulb for each light fixture?

$$200 \times 30 = 6,000 \text{ (kWh)}$$

2. How much electricity do you use during a year if you use an energy saving light bulb for each house's light fixture?

$$60 \times 30 = 1,800 \text{ (kWh)}$$

3. How much electricity can you save if you replace all of the 30 regular light bulbs with energy saving light bulbs?

$$6,000 - 1,800 = 4,200 \text{ (kWh)}$$



4. The average price of 1kWh-electricity in Indiana was 12 cents in 2018. How much money could your family save for electricity in a year if you replaced all of the 30 light bulbs with energy saving light bulbs in a year?

$$4,200 \times 12 = 50,400 \text{ (cents)} = \$ 504$$



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1. Your house has 30 light fixtures. How much electricity do you use during a year if you use a regular light bulb for each light fixture?

$$200 \times 30 = 6,000 \text{ (kWh)}$$

2. How much electricity do you use during a year if you use an energy saving light bulb for each house's light fixture?

$$30 \times 30 = 900 \text{ (kWh)}$$

3. How much electricity can you save if you replace all of the 30 regular light bulbs with energy saving light bulbs?

$$6,000 - 900 = 5,100 \text{ (kWh)}$$

4. The average price of 1kwh-electricity in Indiana was 12 cents in 2018. How much money could your family save for electricity in a year if you replaced all of the 30 light bulbs with energy saving light bulbs in a year?

$$5,100 \times 12 = 61,200 \text{ (cents)} = \$ 612$$

