Who Pays for Warnings?

Why a valuable service may need public funding

E.4.1 "Explain how markets underproduce public goods, and analyze the role of government to resolve those market failures."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the two features that make the warning a public good, circle the reason a private company might provide too few sirens, and number two actions the town could take to improve warning coverage.

A Siren for the Park

1. On a stormy spring afternoon, a town's outdoor warning siren could alert people near a busy park to a tornado threat. Imagine a company offers to install and operate one there. Once the siren sounds, anyone within earshot can hear it, whether or not that person helped pay. One person's hearing the warning does not stop someone else from hearing it. Economists call a service with these features a public good: it is difficult to exclude nonpayers, and use by one person does not leave less for others. The warning can benefit many households at once.

2. Now suppose the company asks nearby households for voluntary payments. Some residents value the siren but decide not to pay because they expect to hear it anyway. This is the free-rider problem. The company collects payments from only some of the people who benefit, even though the broader community may value the warning more than it costs to provide. If the company cannot cover installation and upkeep, it may skip the siren or place fewer sirens than the community would prefer. The market then underproduces this public good, not because the warning has no value, but because payment is hard to collect.

3. A town government could use tax revenue to buy the siren, pay for maintenance, and test it regularly. Residents then share the cost through taxes rather than relying on voluntary payments. Before spending, officials should compare the expected safety benefits with installation costs, upkeep, and other possible uses of public money. A siren near the park might reach people outdoors, but it may not be heard indoors or far away, so the town could pair it with phone alerts. Public funding can solve the payment problem, but it does not make every spending choice worthwhile or guarantee that everyone hears the warning.

2 ANSWER WITH EVIDENCE

Use the passage

1. Why does the siren warning count as a public good? Explain both features using details from the passage.

2. How could voluntary payments cause the company to provide fewer sirens than the community would prefer?

3. How would paying for the siren with taxes address the payment problem in the passage?

4. Why might buying the siren still leave gaps in warning coverage, and what could the town do about them?

3 YOUR TURN

Your own words

Choose a public good other than a warning siren. In 5 to 6 sentences, explain why a private market might provide too little of it, how a government could respond, and one cost or limitation officials should consider.

ANSWER KEY

Who Pays for Warnings?

HIGH SCHOOL · E.4.1

PART 1 · READ AND MARK

Underline the two features that make the warning a public good, circle the reason a private company might provide too few sirens, and number two actions the town could take to improve warning coverage. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Why does the siren warning count as a public good? Explain both features using details from the passage.	**People within earshot can hear it without paying, so excluding nonpayers is difficult. One person's hearing it does not reduce anyone else's ability to hear it.**
2	How could voluntary payments cause the company to provide fewer sirens than the community would prefer?	**Some residents would benefit without paying. The company might then collect too little to cover costs and install fewer sirens, even if the community's total benefit exceeds those costs.**
3	How would paying for the siren with taxes address the payment problem in the passage?	**Taxes would spread the cost among residents instead of depending on voluntary payments from people who can hear the siren without paying.**
4	Why might buying the siren still leave gaps in warning coverage, and what could the town do about them?	**People indoors or far away might not hear it. The town could pair the siren with phone alerts.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Streetlights on a public sidewalk let anyone nearby see at night, even if they never pay for the lights. One person's use of the light does not reduce the light available to others. Because some people can benefit without paying, a private company might collect too little money to install enough lights. The city could pay for streetlights with tax revenue and maintain them along busy sidewalks. Officials should weigh electricity and maintenance costs against the benefits and consider whether lights would shine into nearby homes.

Accept other public goods if the response explains why nonpayers can benefit, connects that problem to underproduction, proposes a government response, and identifies a relevant cost or limitation.