

Belt Line Problem

Problem Booklet

Instructions

Read the problem situation described on the next page. Study the figure until you understand the location of the miners and equipment in the problem. Next, answer each of the 7 questions. Do them one at a time. Don't jump ahead, but you may look back to earlier questions and answers. Some of the questions direct you to choose only one answer unless you are told to "Try again!" Other questions tell you to select as many answers as you think are correct. Follow the directions for each question.

After you have selected a choice to a question, look up its number on the answer sheet. Select your answer to each question by rubbing the special pen between the brackets on the answer sheet. A hidden message will appear that tells you if you are right. When you have finished, you will learn how to score your performance.

Background

You work at a mine that has conveyor belt haulage.

You are a laborer trained in basic first aid.

Doug Sanders and another miner are working with you.

A first aid kit is stored about 200 feet from where you are working.

Problem

You, Doug Sanders, and another miner are shoveling onto the belt-line. While working, Doug catches the tip of his shovel on the moving belt. He is spun around, his arm is thrown to the right, and the shovel is flung a few feet away. Look at Figure 1 and then turn to the following page and read the first question.

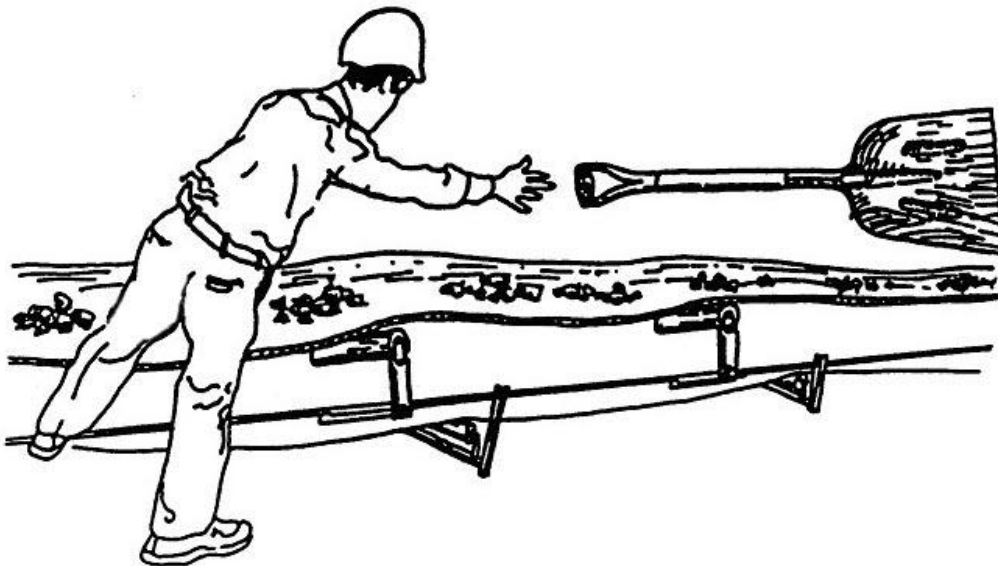


Figure 1: Shovel catches on belt and is jerked from Doug's hand

Question A

Doug is swearing and holding his right shoulder with his left hand. What should you do?
(Choose only ONE unless you are told to "Try again!")

1. Leave Doug and find the foreman.
2. Tell the other miner to get the first aid kit so you can put Doug's arm in a sling.
3. Keep shoveling until Doug tells you he needs help.
4. Check Doug for injuries.

Question B

You are checking Doug for injuries. How would you do this? (Select as MANY as you think are correct.)

5. Ask him to point to where it hurts most.
6. Feel his collar bone, shoulder joint, and upper and lower arm.
7. Look at the way he holds his injured arm.
8. Check both wrist pulses.
9. Ask if he can wiggle the fingers on his right hand.
10. Take his right upper arm and see how far you can move it up and to each side.

When you have made your selection(s), do the next question.

Question C

You tell the other miner that you think Doug has dislocated his shoulder. The other miner says he is sure he can "pop" it back into the correct position. What should you do now? (Choose only ONE unless you are told to "Try again!")

11. Let the other man try to "pop" Doug's shoulder.
12. Say "no thanks" and ask him to get the first aid kit.
13. Ask Doug if he will let the other man "pop" his shoulder in.

Question D

What reason or reasons should you give the other man for not "popping" Doug's shoulder back in place? (Select as MANY as you think are correct.)

14. Doug may have a fractured bone in his shoulder or arm.
15. Improperly putting his shoulder back into place could cause injury to blood vessels or nerves.
16. The shoulder will hurt more after it is put into place.
17. Dislocations often "pop back" into place by themselves and the longer you wait the better.

When you have made your selection(s), do the next question.

Question E

The other man gets the first aid kit and brings it to you. What should you do now?
(Select as MANY as you think are correct.)

18. Place 3 inches of padding on Doug's right side to hold his elbow away from his body.
19. Place an inflatable splint on his right arm.
20. Place Doug's right arm in a sling.
21. Check Doug's right wrist pulse.
22. After Doug's right arm is in a sling, tie a cravat around his chest and his right arm.
23. Unzip Doug's jacket part way and have him put his right hand inside it to support his arm like a sling.

When you have made your selection(s), do the next question.

Question F

Which diagram shows how the sling and cravat should be placed to support Doug's shoulder? (Choose only ONE unless you are told to "Try again!")

24. Figure A.

25. Figure B.

26. Figure C.

27. Figure D.

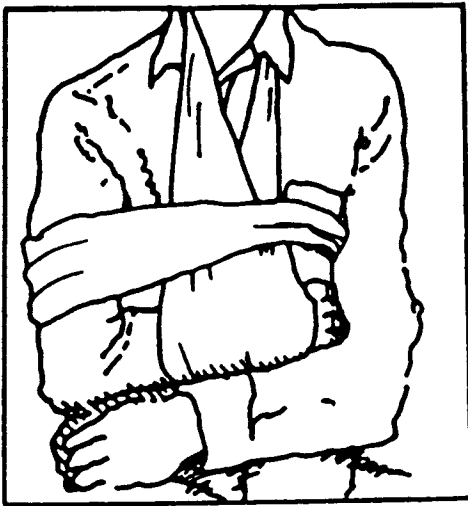


Figure A

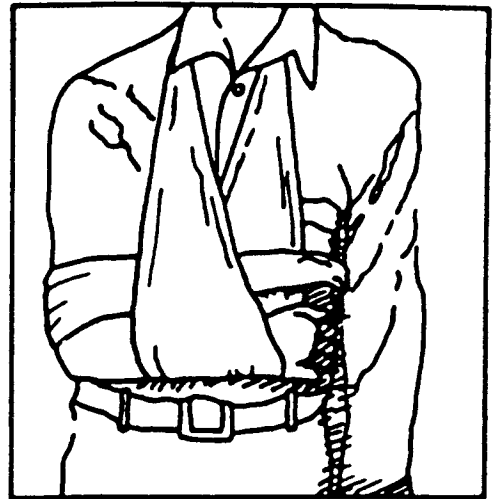


Figure B

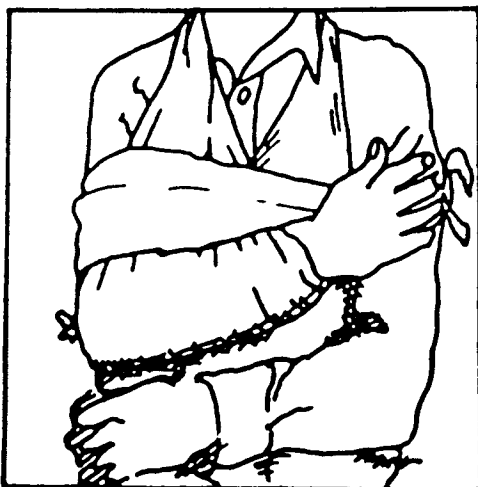


Figure C

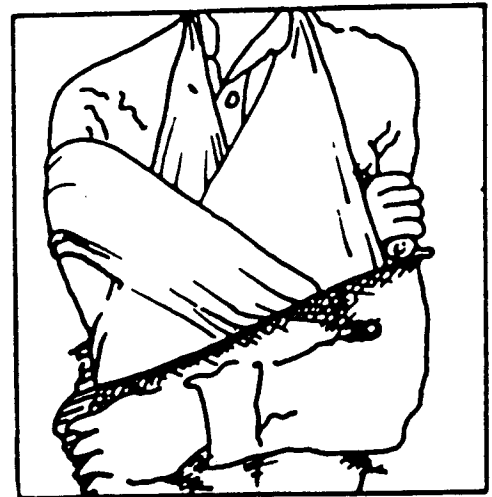


Figure D

Question G

What can you say about why Doug got hurt in the first place? (Choose only ONE unless you are directed to "Try again!")

- 28. The belt was probably moving too fast.
- 29. Doug probably failed to wear gloves.
- 30. The shovel handle was probably wet.
- 31. Doug was probably shoveling against the direction of the belt.
- 32. Doug was probably too slow to safely shovel onto the belt.

Scoring your performance

- 1. Count the total number of responses you colored in that were marked "correct." Write this number in the first blank on the answer sheet.
- 2. Count the total number of incorrect responses you colored in. Subtract this number from 17. Write the difference in the second blank on the answer sheet.
- 3. Add the numbers on the first and second blanks. This is your score.

The best possible score of 32 results from selecting all the correct answers and no wrong answers. The worst possible score of zero results from selecting all the wrong answers and no correct answers.