

Scoop Accident, First Aid Problem

Problem Booklet

Instructions

Read the problem situation described on the next page. Study the diagram until you understand the location of the miners and equipment in the problem. Next, answer each of the 16 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 ask you to choose only one answer unless you are directed to "Try again!" Other questions ask 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 developing pen between the brackets on the answer sheet. A hidden message will appear and tell you if you are right. When you have finished, you will learn how to score your performance.

Scoop Accident, First Aid Problem Exercise

Background

Joe is a newly hired, experienced roof bolter at a two-section drift mine.

This is his first day on the job at this mine.

After 9 months of unemployment, Joe has recently completed the required training to reenter the mines.

He has also just completed an advanced first-aid course.

It is 7:00 a.m. and Joe is waiting with six others to go underground.

The seam height is 4 1/2 feet.

Problem

Joe is getting to know the crew that he will be working with as they wait for a ride to the section. He was told that he will be working about a half mile inside on the 4 right section. When Joe came out of the bathhouse he saw what looked like a new covered mantrip and figured it would be his ride. A scoop loaded with supplies pulls up and six other miners start climbing on top of it. Two miners get into the bucket next to the supplies. Turn the page and do Question A.

Question A

Joe is surprised when everyone gets on the scoop. What should he do now? (Select as MANY as you think are correct.)

1. Find a spot and climb on board so he won't get left behind.
2. Ask "Why aren't we taking the mantrip?"
3. Tell the crew that it is dangerous and stupid to ride on the scoop.
4. Offer to go get the covered mantrip to use instead of the scoop.
5. Suggest that one scoop be used to haul the supplies and that the miners ride in the bucket of another scoop.

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

Question B

Joe gets on top of the battery compartment and the scoop heads inside with the bucket trailing. (See Figure 1 on the next page.) The ride is bumpy and Joe has difficulty hanging on. Eight crosscuts inside the mine, the scoop's front lights flicker and then go out completely. What is the best thing for the foreman to do now? (Choose only ONE unless you are told to "Try Again!")

6. Tell everyone to shine their cap lights ahead and tell the operator to continue to tram the scoop toward the section.
7. Instruct the scoop operator to turn around and use the lights on the other end to continue on.
8. Tell the scoop operator to troubleshoot the electrical problem.
9. Tell everyone to get off, move the scoop to a crosscut, and send someone to get the covered mantrip.
10. Tell the scoop operator to continue on. He is familiar with the roadway.

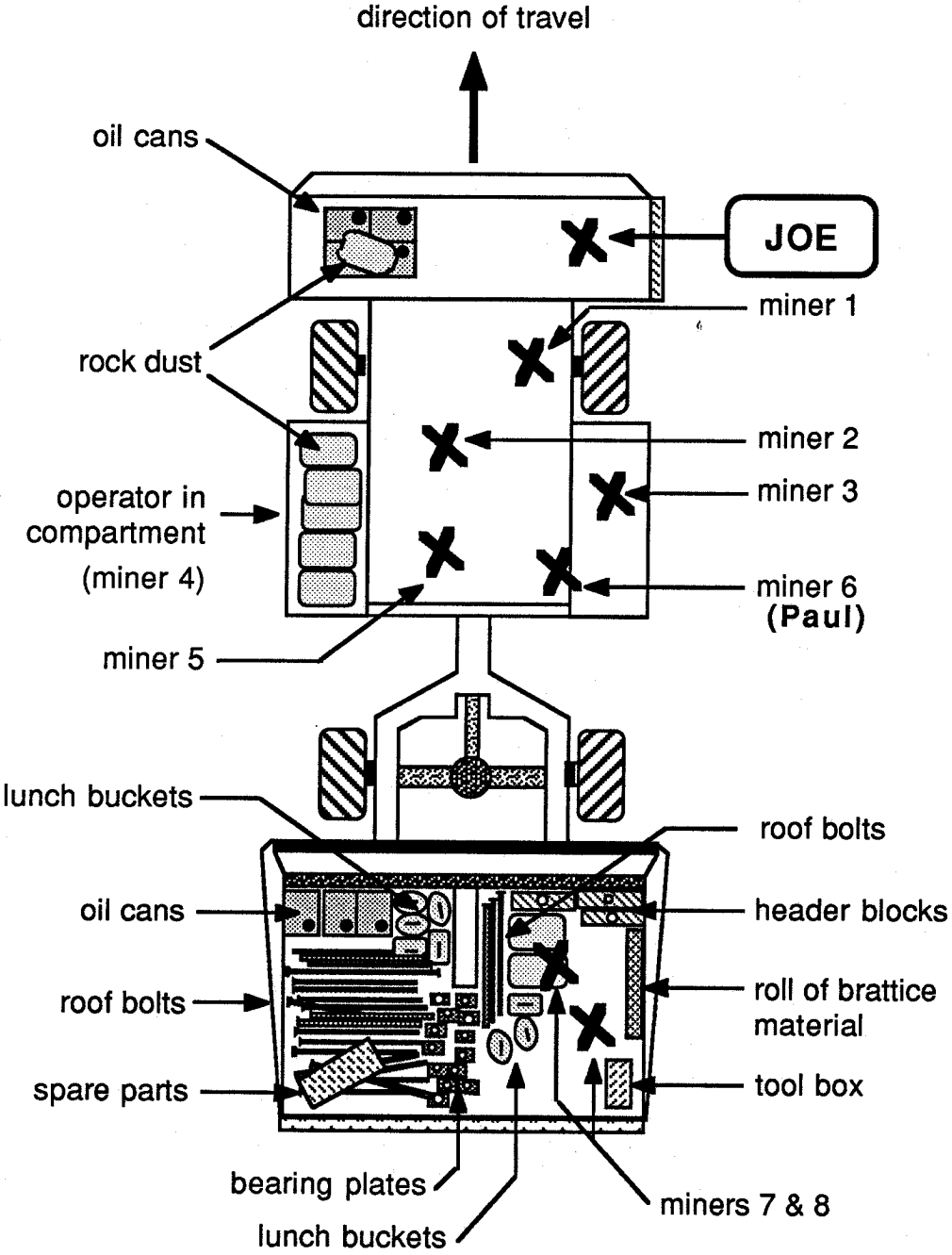


Figure 1: Position of miners and supplies on the scoop

Question C

Joe is straining to keep his cap lamp shining on the roadway while keeping his head from hitting the roof. His hat scrapes the roof twice before the scoop stops at the underground shop, which is about 15 crosscuts in. The two miners who were riding in the bucket get off, taking a few supplies with them. They load more brattice cloth and some cutter bits into the scoop bucket. What is the best thing for Joe to do now? (Choose only ONE unless you are told to "Try Again!")

11. Get off with them.
12. Move to the bucket.
13. Try to get more comfortable for the rest of the ride to the section. Get as low as possible.
14. Lie down, take his hat and cap lamp off and hold them in front of him to help light the way.

Question D

Joe is worried about keeping his job, so reluctantly he gets into the scoop bucket with the remaining supplies. See Figure 2 for the miners' positions on the scoop.

The scoop proceeds at high speed down a steep grade toward the 4 right section. Joe and the supplies in the bucket are bouncing around. As the scoop approaches the dinner hole, someone screams "Stop! Paul's fallen off!" Paul is lying on his back in a puddle of water on the mine floor, just behind the scoop bucket. The scoop has run over him. There is blood on both of Paul's legs just below his knees and he is not moving.

The foreman goes over and kneels by Paul. He keeps saying over and over again, "Paul, are you OK.? Don't die on me!" All the other miners stand around in a circle and watch. No one touches Paul. What should Joe do now? (Choose only ONE unless you are told to "Try again!")

15. Tell the foreman that he knew this would happen.
16. Take charge! Begin first aid for Paul and direct the others to help.
17. Ask the foreman what he should do.
18. Run to the dinner hole, look for the pager, and call out to the surface.
19. Remember he is new and wait for one of the other miners to take charge.

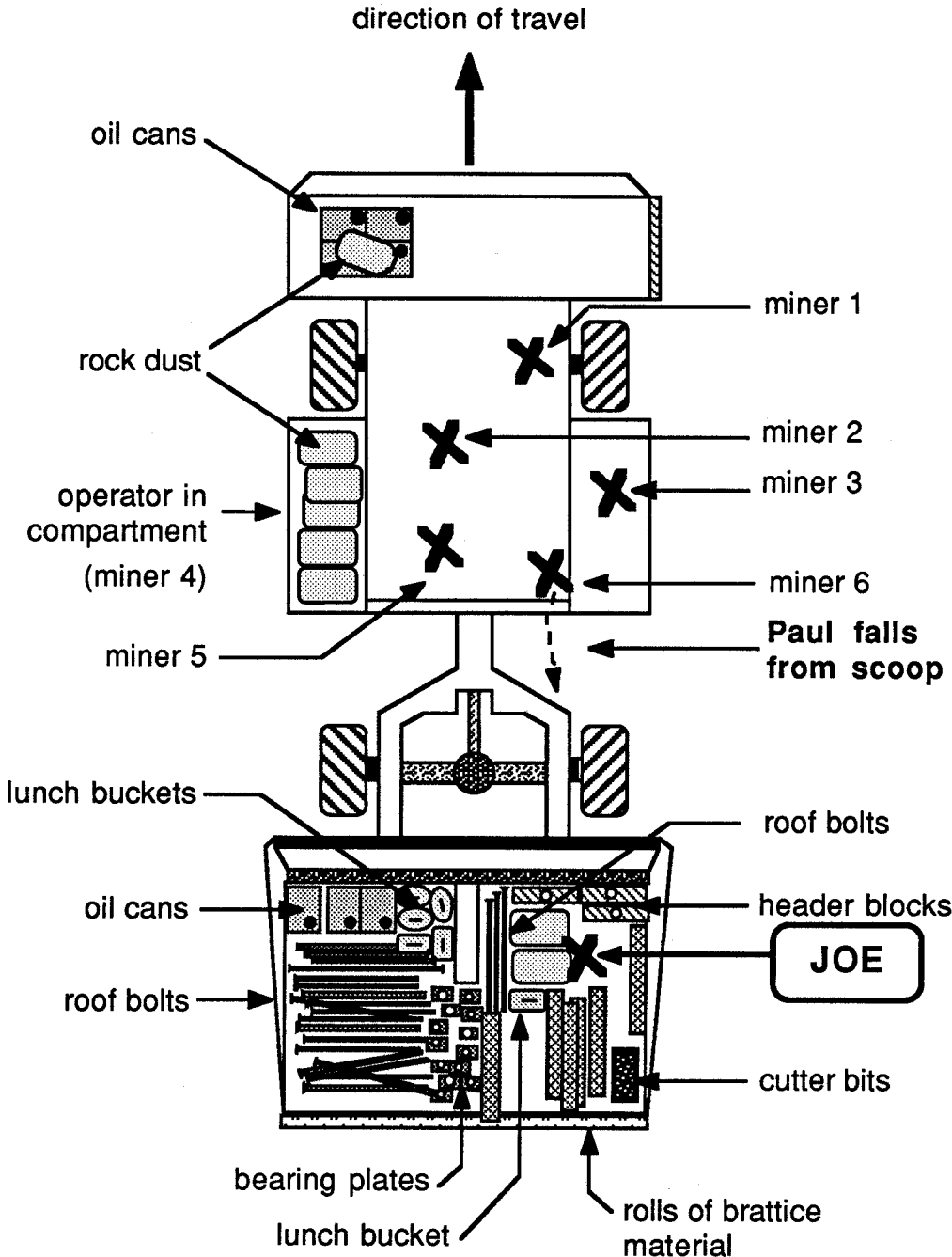


Figure 2: Joe's position in the bucket and the others' positions

Question E

Joe takes charge. He learns that a pager, stretcher, and first aid supplies are located at the dinner hole about 200 feet away. What should Joe do now? (Select as MANY as you think are correct.)

- 20. Send two miners to get the first aid supplies and a stretcher and to phone outside.
- 21. Begin checking Paul for injuries.
- 22. Have two miners put Paul into the scoop bucket for immediate transport outside.
- 23. Have another miner help him use a clothing drag to pull Paul out of the water and then prop him up against the rib in a dry place.
- 24. Have someone remove the supplies from the scoop bucket so that Paul can be transported outside.
- 25. Send someone to get another scoop from the section so that it may be used to transport Paul outside.

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

Question F

Joe is nervous about having to use first-aid on an actual victim, but he calms himself down by taking a couple of deep breaths. He kneels down next to Paul, pinches his shoulder, and yells, "Are you OK?" Paul doesn't respond. What should he do now? (Select as MANY as you think are correct.)

26. Open Paul's airway by lifting on the back of his neck and gently tilting his head backwards.
27. Make sure Paul's airway is open by using the "jaw thrust" method.
28. Gently loosen the collar on Paul's shirt.
29. Check to see if Paul is breathing.
30. Immediately begin treating Paul's leg injuries.
31. Prop up Paul's head and shoulders to make him more comfortable.
32. Feel Paul's neck pulse.
33. Look in Paul's wallet to try to determine any medical problems and his next of kin.

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

Question G

Paul begins to moan and say his legs hurt. A miner returns with the second scoop and parks it nearby. Paul is lying flat on his back. Both of his pants legs are soaked with blood about 8 inches below his knees. What should Joe do now? (Select as MANY as you think are correct.)

- 34. Take his pocket knife and slit the lower legs of Paul's pants.
- 35. Prop Paul's legs up about six inches and cover him with a blanket.
- 36. Ask two of the miners to help you immediately move Paul to the scoop bucket.
- 37. Continue checking Paul for injuries.
- 38. Tell Paul that both legs are pretty messed up but you think they can be saved.

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

Question H

After slitting Paul's pant legs you see apparent open fractures of both the right and left lower legs. The left leg wound is oozing dark blood. The right leg wound is spurting bright red blood. What is the first thing Joe should do now? (Choose only ONE unless you are told to "Try Again!")

- 39. Use his belt as a tourniquet. Apply it tightly just above the right knee.
- 40. Place Paul on the stretcher so he can be moved out of the mine at once.
- 41. Use a handkerchief and his hand to apply direct pressure to stop the spurting blood.
- 42. Place inflatable splints on both of Paul's legs.
- 43. Apply a sterile dressing over the place where the blood is spurting. Then tie the dressing in place over the wound using a couple of cravat bandages.

Question I

Joe applies direct pressure to the wound on the right leg for about 5 minutes and then sees that the bleeding has nearly stopped. Joe calls another miner over to maintain the pressure while he continues to check the victim. Paul is lying in a puddle of cold water 2 inches deep. He is moaning and says he is cold. His pulse is fast (130) and weak. He is pale and his forehead feels clammy and cold. What should Joe do now? (Select as MANY as you think are correct.)

- 44. Gently lift Paul onto the stretcher. Take him to the surface before he bleeds to death.
- 45. Leave Paul where he is. Pack both lower leg wounds with dressings. Then apply pressure bandages over the dressings.
- 46. Move Paul out of the puddle and onto the stretcher before administering further first aid.
- 47. Leave Paul where he is. After the pressure bandages are in place, splint and immobilize both of his lower legs.

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

Question J

Joe decides that Paul's legs must be bandaged, splinted, and immobilized before he can be moved. Joe and another miner quickly apply dressings and pressure bandages to both of Paul's leg wounds. The first aid kit contains 24 cravat bandages and two, three foot long wood splints. How should Joe splint Paul's legs? (Select as MANY as you think are correct.)

- 48. Take an ankle pulse on both legs before and after applying the splint.
- 49. Have another miner help him support both sides of the fracture and carefully lift each leg while a third miner slips a padded splint under the leg.
- 50. Use cravats to secure each leg to its splint. Tie the knots at the edge of the splint, not on top of the wounds on Paul's legs.
- 51. If a bone end sticks through the pressure dressing when he is splinting the right leg, tie the cravat snugly over the protruding bone.
- 52. Before splinting each leg, pull sharply on Paul's foot to straighten out the leg.
- 53. For both of Paul's legs, make sure to tie cravats around the leg and the splint on both sides of the open fracture.

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

Question K

Joe has splinted both of Paul's legs. There is no new bleeding around the pressure bandages. Both lower legs are tied to the splints with cravats above and below the fractures. Paul is still lying in the puddle. What should Joe do next? (Choose only ONE unless you are told to "Try Again!")

54. Remove Paul's wet clothing before moving him from the puddle so he can be wrapped in a dry blanket after he is placed on the stretcher.
55. Grab Paul by his coveralls at his shoulders and drag him onto the stretcher.
56. Lift Paul to the stretcher by having three other miners support Paul's legs, hips, and chest with their hands and arms, while Joe holds Paul's head in line with his body.
57. Bring up a scoop. Move the bucket close to Paul. Then have three other miners help you log roll Paul into the scoop bucket.

Question L

Joe and three other miners have lifted Paul to the stretcher. They kept his head and body fully supported and immobile during the lift. Paul is now lying on his back on the stretcher in a dry place. The stretcher is padded with a folded dry blanket. Now what should Joe do? (Select as MANY as you think are correct.)

- 58. Tie Paul to the stretcher from the waist down to protect his injured legs, and then transport him to the surface.
- 59. Tie Paul's upper legs, waist, and chest to the stretcher, but leave his head free so that it can be turned to the side if he begins to vomit.
- 60. Tie Paul's upper legs, waist, and chest to the stretcher, and use a blanket roll and cravats to immobilize Paul's head on the stretcher.
- 61. Cover Paul with a blanket or with miners' jackets if no blankets are available.

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

Question M

Paul is fully immobilized on his back on the stretcher. No new bleeding has appeared around the pressure bandages. Paul is moaning. His pulse is about 130 and weak. It has been about 20 minutes since he was injured. Now what should Joe do? (Select as MANY as you think are correct.)

- 62. Have two miners carry Paul out on the stretcher.
- 63. Have two miners sit in the scoop bucket with him. Place the stretcher with Paul on it across their legs so they can hold Paul and cushion him on the way out.
- 64. After Paul is loaded into the scoop, tell the scoop operator to get outside as fast as he can.
- 65. Keep the foot end of the stretcher elevated about a foot while Paul is taken out.
- 66. Monitor Paul's breathing and pulse on the way out.
- 67. Watch Paul's pressure dressings for signs of bleeding.
- 68. Talk to Paul on the way out even if he does not respond. Tell him what is being done and that he is doing OK.

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

Question N

Paul was taken to an area hospital where he received prompt medical attention. Joe's good first aid care prevented Paul's injuries from being more serious and may have saved his life. After a year of recovery and therapy, Paul was back to normal and working.

Many factors contributed to this accident. Identify those factors that could have been corrected or prevented. (Select as MANY as you think are correct.)

- 69. Joe should have had more task training.
- 70. The scoop operator should have removed all electrical covers and inspection plates and thoroughly checked the lighting circuits before putting the scoop into operation.
- 71. The foreman should not have allowed miners to ride on top of the scoop.
- 72. If a scoop is to be used as a mantrip, only miners and no other equipment should be carried in the bucket.
- 73. The miners should have refused to ride on top of the scoop and also refused to light the way with their cap lamps.
- 74. Extra top should have been taken to make it safer for miners to ride into the section on top of equipment.

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

Question O

Suppose you were in Joe's position. You have just started back to work. You need the money. You want to start out right and keep this job. But you are worried about the unsafe work practices you see as you enter the mine. What would you do? Why?

Complete the following statements. Then share your ideas with the other miners and the instructor during the class discussion.

- 75. I would.....(complete your statement on the answer sheet.).....
- 76. I would do this because.....(complete your statement on the answer sheet.).....
- 77. If I did this, what might or might not happen?.....(complete your list on the answer sheet.)

Question P

List all the violations of federal and state laws and your company rules that you can find in this problem. (Write your list on the answer sheet.)

Scoring your performance

- 1. For questions A through N, count the number of responses you colored in that were marked "Correct." Write this number in the first blank on the answer sheet.
- 2. For questions A through N, count the total number of "Incorrect" responses you colored in. Subtract this number from 42. 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 for questions A through N.

The best possible score for questions A through N is 74 and 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.

After you complete the exercise, discuss your answers to questions O and P with your classmates and the instructor. As you take part in the discussion, you decide which answers are best for these two questions.