ERRATA for
PE Mining and Mineral Processing Practice Exam
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Revisions are shown in red.

Question 13, p. 20:
A mining shovel has a 40-yd^3 bucket. It is digging in ore with an in situ weight of 4,000 lb/yd^3. The bucket fill factor is 80% and the material swell factor is 16%. The shovel loads trucks rated for 300 tons with a fill factor of 92% and with an average cycle time of 38 sec per pass. The time (min) to load each truck is most nearly:

- A. 2.53
- B. 2.72
- C. 3.17
- D. 3.42

Question 14, p. 21:
The crosscut dimensions are: 15 ft wide × 120 ft long × 16 ft high.

Question 72, p. 58:
A rural community is complaining to a coal mining company that its underground operations are creating surface subsidence. Which of the following features are **not** evidence of mining-induced subsidence?

Select the **two** that apply.

- A. Sinkhole
- B. Weathered topsoil
- C. Tension cracks
- D. Troughs and sags
- E. Minor stucco cracks in a house
- F. Localized trough in the road
- G. Rills

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Question 73, p. 59:
The capacity of the mined-out pit is 10M cy.

Solution 13, p. 78:
Shovel bucket:
[(4,000 lb/yd^3)/1.16 × 40 yd^3 × 0.80]/2,000 lb/ton = 55.2 tons/bucket

Buckets per truck:
[(300 tons/truck) × 0.92]/(55.2 tons/bucket) = 5 buckets/truck = 5 shovel passes
5 passes × 38 sec/pass = 190 sec = 3.17 min

THE CORRECT ANSWER IS: C

Solution 72, p. 100:
Weathered topsoil and rills are caused by water erosion, not subsidence. All other options could be mining-induced.

THE CORRECT ANSWERS ARE: B, G

Solution 73, p. 100:
10M cy × 27 ft^3/1 yd^3 × 83.5 lb/ft × ton/2,000 lb = 11.3 = 11 million tons

THE CORRECT ANSWER IS: B

Solution 83, p. 103:
A ratio of 2:1 or greater is common knowledge in the industry, shown in many references and the *SME Mining Reference Handbook*. Pools can be designed based on other ratios with modified designs, such as with channels through ponds to slow flow or with berms or other infrastructure, but 2:1 or greater is the general rule of thumb. The critical concept is that pool length must be greater than pool width, with only one correct answer given.

THE CORRECT ANSWER IS: C