1. If y varies directly as x, then inputting consecutive natural numbers for x will produce output y-values that form a(n)

A. arithmetic sequence

B. a non-arithmetic sequence

C. proportion

D. an inversely proportional statement

E. geometric sequence

2. Solve the proportion $\frac{-x+3}{5} = \frac{-3x-2}{2}$.

A. $-\frac{32}{13}$

B. $-\frac{16}{39}$

C. $\frac{16}{13}$

D. $-\frac{64}{13}$

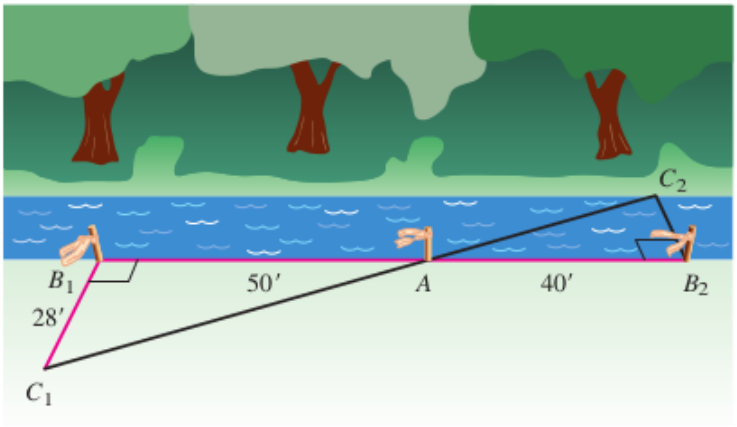
E. $-\frac{16}{13}$

F. $\frac{64}{13}$

G. $-\frac{48}{13}$

H. $-\frac{8}{13}$

3. Use the dimensions shown in the figure below to determine the width of the river. Triangles AB_1C_1 and AB_2C_2 are similar. If necessary, round your answer to the nearest tenth.



A. The river is 21.7 ft wide.

B. The river is 23.9 ft wide.

C. The river is 22.4 ft wide.

D. The river is 21.3 ft wide.

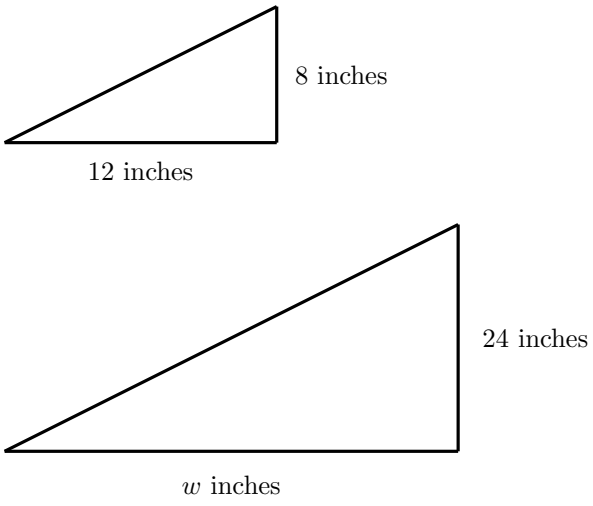
E. The river is 23.3 ft wide.

F. The river is 21.5 ft wide.

G. The river is 23.5 ft wide.

H. The river is 23.6 ft wide.

4. The triangles below are similar. Find the the length of w. If necessary, round your answer to the nearest tenth.



A. $w = 36.5$ inches.

B. $w = 37.2$ inches.

C. $w = 36.9$ inches.

D. $w = 37.5$ inches.

E. $w = 34.6$ inches.

F. $w = 34.8$ inches.

G. $w = 36$ inches.

H. $w = 36.8$ inches.

5. A photograph with a length of 3 inches and a width of 6 inches needs to be enlarged. If the enlarged photograph has a width of 22 inches, what is the length of the enlarged photograph? If necessary, round your answer to the nearest tenth.

A. The enlarged photograph will have a length of 11 inches.

B. The enlarged photograph will have a length of 12.1 inches.

C. The enlarged photograph will have a length of 9.7 inches.

D. The enlarged photograph will have a length of 12.5 inches.

E. The enlarged photograph will have a length of 12.2 inches.

F. The enlarged photograph will have a length of 10.1 inches.

G. The enlarged photograph will have a length of 11.5 inches.

H. The enlarged photograph will have a length of 9.6 inches.

6. On a map, 11 inches represents 350 miles. What distance does 19 inches represent? If necessary, round your answer to the nearest tenth.

A. 19 inches represents 604.5 miles.

B. 19 inches represents 362.7 miles.

C. 19 inches represents 302.3 miles.

D. 19 inches represents 544.1 miles.

E. 19 inches represents 785.9 miles.

F. 19 inches represents 725.4 miles.

G. 19 inches represents 483.6 miles.

H. 19 inches represents 423.2 miles.

7. A manufacturer found that 3 light bulbs out or 500 light bulbs were defective. How many light bulbs would we expect to be defective in a shipment of 5000 light bulbs? Round your answer to the nearest whole unit.

A. We would expect about 33 light bulbs to be defective.

B. We would expect about 27 light bulbs to be defective.

C. We would expect about 30 light bulbs to be defective.

D. We would expect about 23 light bulbs to be defective.

E. We would expect about 35 light bulbs to be defective.

F. We would expect about 21 light bulbs to be defective.

G. We would expect about 25 light bulbs to be defective.

H. We would expect about 39 light bulbs to be defective.

8. A small object measures 1.6 mm but under a microscope appears to be 5.5 mm. If an object actually measures 1.9 mm, what will its apparent length be under this microscope? If necessary, round your answer to the nearest tenth.

A. An object which measures 1.9 mm appears to be 9.1 mm under the microscope.

B. An object which measures 1.9 mm appears to be 8.5 mm under the microscope.

C. An object which measures 1.9 mm appears to be 6.5 mm under the microscope.

D. An object which measures 1.9 mm appears to be 4.6 mm under the microscope.

E. An object which measures 1.9 mm appears to be 7.8 mm under the microscope.

F. An object which measures 1.9 mm appears to be 5.2 mm under the microscope.

G. An object which measures 1.9 mm appears to be 3.9 mm under the microscope.

H. An object which measures 1.9 mm appears to be 7.2 mm under the microscope.