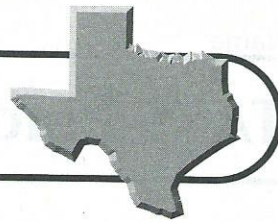# TAKS Practice (continued)

3 Alec uses the Pythagorean Theorem to calculate the distance from the front left corner of his yard to the back right corner. He calculates the distance to be $\sqrt{924}$ yards. What is the approximate distance from the front left corner to the back right corner?

A 3 yards

B 13 yards

C 23 yards

D 30 yards

4 Mr. McMillan writes four irrational numbers on the board and asks one of his eighth grade students to choose the number that is closest to her age. Which of these irrational numbers did the student most likely choose?

F π

G $\sqrt{13}$

H $\sqrt{195}$

J $\sqrt{1623}$

5 Which point on the number line best represents $\sqrt{8}$?

A Point A

B Point B

C Point C

D Point D

(8.1)(D) **Number, operation, and quantitative reasoning** The student understands that different forms of numbers are appropriate for different situations. The student is expected to express numbers in scientific notation, including negative exponents, in appropriate problem situations.

1 A hydrogen molecule is 1.5×10^{-10} meters in length. What is this number in standard notation?

A 0.000000015

B 0.0000000015

C 0.00000000015

D 0.000000000015

2 People have about 25,000,000,000,000 red blood cells in their bodies at any one time. What is this number in scientific notation?

F 2.5×10^{10}

G 2.5×10^{11}

H 2.5×10^{12}

J 2.5×10^{13}

3 The diameter of Mercury is 4,879 kilometers. What is this number in scientific notation?

A 4.879×10^{-4}

B 4.879×10^{-3}

C 4.879×10^{3}

D 4.879×10^{4}

4 Light travels at approximately 1.225×10^{6} meters per hour. What is this speed in kilometers per hour?

F 1,225 kph

G 12,250 kph

H 122,500 kph

J 1,225,000 kph

5 One light year is approximately 5.879×10^{12} miles. What is this number in standard notation?

A 5.879 million miles

B 5,879,000 miles

C 5,879,000,000 miles

D 5,879,000,000,000 miles