MIXED REVIEW FOR TEKS

TAKS PRACTICE
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Lessons 8.1–8.3

MULTIPLE CHOICE

1. TIME The table shows units of measurement of time and the durations of the units in seconds.

Name of unit	Duration (seconds)
Gigasecond	10^9
Megasecond	10^6
Millisecond	10^{-3}
Nanosecond	10^{-9}

Which is the greatest number? *TEKS A.11.A*

Ⓐ The number of nanoseconds in 1 millisecond

Ⓑ The number of nanoseconds in 1 megasecond

Ⓒ The number of megaseconds in 1 gigasecond

Ⓓ The number of milliseconds in 1 gigasecond

2. SOUND The least intense sound that is audible to the human ear has an intensity of about 10^{-12} watt per square meter. The intensity of sound from a jet engine at a distance of 30 meters is about 10^{15} times greater than the least intense sound. How intense is the sound (in watts per square meter) 30 meters from the jet engine? *TEKS A.11.A*

Ⓕ $\left(\frac{1}{10}\right)^3$ Ⓖ 100

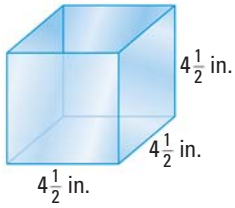
Ⓗ 1000 Ⓙ 10,000

3. OIL For an experiment, a scientist dropped a spoonful, or about 10^{-1} cubic inch, of biodegradable olive oil into a pond to see how the oil would spread out over the surface of the pond. She found that the oil spread until it covered an area of about 10^5 square inches. About how deep was the layer of oil that spread across the pond? *TEKS A.11.A*

Ⓐ 10^{-6} in. Ⓑ 10^{-4} in.

Ⓒ 10^4 in. Ⓓ 10^6 in.

4. SUPPLIES A store sells cubical containers that can be used to store office supplies.



Write the edge length as an improper fraction and substitute the length into the formula for the volume of a cube. Which is the volume (in cubic inches) of the cube? *TEKS A.11.A*

Ⓕ $\frac{9^3}{2^3}$ Ⓖ $43 + \left(\frac{1}{2}\right)^3$

Ⓗ $\frac{9^3}{2}$ Ⓙ Not here

5. RAINDROPS Clouds contain millions of tiny spherical water droplets. The radius of a droplet is around 10^{-4} centimeter. By combining their volumes, the droplets form a raindrop. The radius of a spherical raindrop is 10^{-2} centimeter. How many droplets combine to form 1 raindrop? *TEKS A.11.A*

Ⓐ 10^{-2} Ⓑ 10^2

Ⓒ 10^{12} Ⓓ 10^{56}

GRIDDED ANSWER

6. COMPUTERS In 2004, the fastest computers could record about 10^{10} bits per second. (A bit is the smallest unit of memory storage for computers.) At the time, scientists believed that the speed limit at which computers could record was about 10^{12} bits per second. How many times more bits per second was the speed limit than the fastest computers? *TEKS A.11.A*