



MIXED REVIEW FOR TEKS



TAKS PRACTICE
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Lessons 4.6–4.10

MULTIPLE CHOICE

1. **GAMES** You are playing a lawn version of tic-tac-toe in which you toss bean bags onto a large board. One of your tosses can be modeled by the function $y = -0.12x^2 + 1.2x + 2$ where x is the bean bag's horizontal position (in feet) and y is the corresponding height (in feet). What is the bean bag's maximum height?

TEKS 2A.8.B

- (A) 2.5 feet
- (B) 5 feet
- (C) 6 feet
- (D) 10 feet

2. **MUSICAL INSTRUMENTS** A music store sells about 50 of a new model of drum per month at a price of \$120 each. For each \$5 decrease in price, about 4 more drums per month are sold. Which inequality can you use to find the prices that result in monthly revenues over \$6500?

TEKS 2A.8.A

- (F) $(50 + 5x)(120 - 4x) > 6500$
- (G) $(50 - 5x)(120 + 4x) > 6500$
- (H) $(50 - 4x)(120 + 5x) > 6500$
- (J) $(50 + 4x)(120 - 5x) > 6500$

3. **SPORTS** You throw a ball to your friend. The ball leaves your hand 5 feet above the ground and has an initial vertical velocity of 50 feet per second. Your friend catches the ball when it falls to a height of 3 feet. About how long is the ball in the air? **TEKS 2A.8.D**

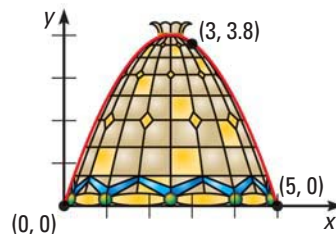


- (A) 0.04 second
- (B) 0.1 second
- (C) 3.16 seconds
- (D) 3.22 seconds

4. **ABSOLUTE VALUE** What is the absolute value of $-4 + 5i$? **TEKS a.2**

- (F) 3
- (G) $2\sqrt{10}$
- (H) $\sqrt{41}$
- (J) $3\sqrt{5}$

5. **LIGHTING** The diagram shows a design for a hanging glass lamp. Which equation models the parabolic cross section of the lamp? **TEKS 2A.6.C**



- (A) $y = x(x - 5)$
- (B) $y = -x(x + 5)$
- (C) $y = -0.63x(x - 5)$
- (D) $y = 0.63x(x + 5)$

6. **COMPLEX CONJUGATES** What is the product of $5 - 9i$ and its complex conjugate? **TEKS a.2**

- (F) -56
- (G) -11
- (H) 56
- (J) 106

GRIDDED ANSWER

7. **STATIONERY DESIGN** You are designing notepaper with solid stripes along the paper's top and left sides as shown. The stripes will take up one third of the area of the paper. The paper measures 5 inches by 8 inches. What will the width x of the stripes be? Round your answer to the nearest tenth of an inch.

TEKS 2A.8.D

