

Intermediate Algebra 15% ~ about 9 out of 60

4. Two enterprising college students decide to start a business. They will make up and deliver helium balloon bouquets for special occasions. It will cost them \$39.99 to buy a machine to fill the balloons with helium. They estimate that it will cost them \$2.00 to buy the balloons, helium, and ribbons needed to make each balloon bouquet. Which of the following expressions could be used to model the total cost for producing b balloon bouquets?

- A. $\$2.00b + \39.99
- B. $\$37.99b$
- C. $\$39.99b + \2.00
- D. $\$41.99b$
- E. $\$79.98b$

A

$39.99 + 2(b)$

5. Uptown Cable, a cable TV provider, charges each customer \$120 for installation, plus \$25 per month for cable programming. Uptown's competitor, Downtown Cable, charges each customer \$60 for installation, plus \$35 per month for cable programming. A customer who signs up with Uptown will pay the same total amount for cable TV as a customer who signs up with Downtown if each pays for installation and cable programming for how many months?

- F. 3
- G. 6
- H. 10
- J. 18
- K. 30

G

Uptown: $120 + 25m = 6$
 Downtown: $60 + 35m = 6$
 $60 = 10m$
 $6 = m$
 6 months

Coordinate Geometry 15% ~ about 9 out of 60

6. What is the slope of the line through $(-5, 2)$ and $(6, 7)$ in the standard (x, y) coordinate plane?

- F. 9
- G. 5
- H. -5
- J. $\frac{5}{11}$
- K. $-\frac{5}{11}$

J

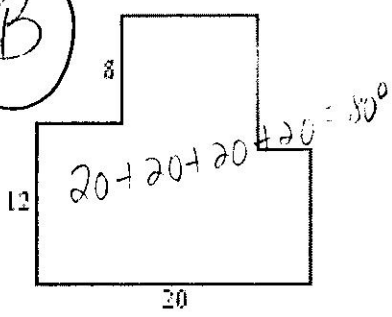
$M = \frac{y_2 - y_1}{x_2 - x_1} = \frac{7 - 2}{6 - (-5)} = \frac{5}{11}$

Plane Geometry 23% ~ about 14 out of 60

7. In the 8-sided figure below, adjacent sides meet at right angles and the lengths given are in meters. What is the perimeter of the figure, in meters?

- A. 40
- B. 80
- C. 120
- D. 160
- E. 400

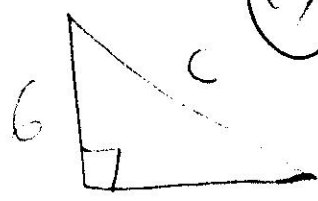
B



8. What is the length, in feet, of the hypotenuse of a right triangle with legs that are 6 feet long and 7 feet long, respectively?

- F. $\sqrt{13}$
- G. $\sqrt{85}$
- H. 13
- J. 21
- K. 42

G



$a^2 + b^2 = c^2$
 $6^2 + 7^2 = c^2$
 $85 = c^2$