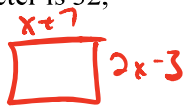


Practice Exercise 6

1. A rectangle has a length of $x + 7$ and a width of $2x - 3$. If its perimeter is 32, what is the value of $3x$?

$24 = 4x$
 $12 = 3x$

- A. 4 D. 36
B. 12 E. 42
C. 14
- $P = x+7 + x+7 + 2x-3 + 2x-3$
 $32 = 6x + 8$



2. The height of a triangle is 5 less than double its base, which is $\frac{13}{2}$. Find the triangle's area.

$2(\frac{13}{2}) - 5$
 $= 13 - 5$
 $= 8$



- A. 13 inches D. $11\frac{7}{2}$ inches
B. 26 inches E. $16\frac{1}{2}$ inches
C. 52 inches
- $A = \frac{1}{2} \cdot 8 \cdot (\frac{13}{2}) = 26$

3. $(x + 3) + (5x - 7) = 6x - 4$

- A. $6x - 4$
B. $6x + 4$
C. $5x + 10$
D. $6x - 6$
E. $4x - 6$

4. $(2x - 1)(3x^2 + 2x - 5) = 6x^3 + x^2 - 12x + 5$

- A. $6x^3 + x^2 - 12x + 5$
B. $8x^3 + x^2 - 12x + 6$
C. $12x^3 + x^2 - 6x + 5$
D. $6x^3 + x^2 - 8x + 6$
E. $3x^3 - 2x^2 + 6$

5. $(b - 2)^2 = (b - 2)(b - 2) = b^2 - 2b - 2b + 4$

- A. $b^2 - 4b + 4$
B. $b^2 + 4b - 4$
C. $b^2 - 4$
D. $b^2 - 2$
E. $b^2 - 2b - 4$

6. Factor completely: $x^2 - 6x + 5$

- A. $(x + 1)(x + 5)$
B. $(x - 1)(x - 6)$
C. $(x - 2)(x - 3)$
D. $(x - 2)(x + 3)$
E. $(x - 1)(x - 5)$
- $(x - 5)(x - 1)$

7. The limousine that you hired costs \$400 plus \$45 for each hour of service. If your total cost for the limousine is \$670, how many hours did you have the vehicle?

- A. 8
B. 7
C. 5
D. 6
E. 9
- $h = \text{hour}$
 $C = 400 + 45h$
 $670 = 400 + 45h$
 $270 = 45h$
 $6 = h$

8. Three times the sum of two consecutive integers is 69. The two integers are:

- A. 11 and 12
B. 17 and 18
C. 21 and 22
D. 15 and 16
E. 12 and 13
- $3[x + x + 1] = 69$
 $3(2x + 1) = 69$
 $2x + 1 = 23$
 $2x = 22$
 $x = 11$

9. Factor completely: $y^2 + 15y + 56 = (y + 7)(y + 8)$

- A. $(y - 7)(y + 8)$
B. $(y + 8)(y + 9)$
C. $(y - 7)(y - 8)$
D. $(y + 7)(y + 8)$
E. $(y + 7)(y + 9)$

10. Solve for the variable: $(x - 3)^2 = 0$

- A. ± 3
B. -3 only
C. 3 only
D. 9 only
E. ± 9
- $x - 3 = 0$
 $x = 3$