Answer Key · Lesson 9.2: Evaluating Expressions

School Launch · Pre-Algebra · Unit 9 · Worksheet A · for the parent

Key

1. 31

Evaluate $7x + 10$ when $x = 3$.

2. -18

Evaluate $5x + 12$ when $x = -6$.

3. -28

Evaluate $5x + 2$ when $x = -6$.

4. 60

1. Substitute $x = -6$: $(-6)^2 - 3 \times (-6) + 6$
2. $= 36 - 3 \times (-6) + 6$
3. $= 36 - (-18) + 6$
4. $= 60$

Evaluate $x^2 - 3x + 6$ when $x = -6$.

5. 33

1. Substitute $x = 8$: $(8)^2 - 4 \times (8) + 1$
2. $= 64 - 4 \times (8) + 1$
3. $= 64 - 32 + 1$
4. $= 33$

Evaluate $x^2 - 4x + 1$ when $x = 8$.

6. 22

1. Substitute $x = 7$: $(7)^2 - 4 \times (7) + 1$
2. $= 49 - 4 \times (7) + 1$
3. $= 49 - 28 + 1$
4. $= 22$

Evaluate $x^2 - 4x + 1$ when $x = 7$.

7. 12

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

Evaluate $x^2 - 6x + 5$ when $x = -1$.

8. $\frac{137}{2}$

1. Substitute $x = 7, y = 3$: $\frac{2 \times (7)^2 - (3)}{2} + (7) \times (3)$
2. $= \frac{2 \times 49 - (3)}{2} + (7) \times (3)$
3. $= \frac{98 - (3)}{2} + (7) \times (3)$
4. $= \frac{98 - (3)}{2} + 21$
5. $= \frac{137}{2}$

Evaluate $\frac{2x^2 - y}{2} + xy$ when $x = 7$ and $y = 3$.

9. $-\frac{5}{2}$

1. Substitute $x = -5, y = 5$: $\frac{2 \times (-5)^2 - (5)}{2} + (-5) \times (5)$
2. $= \frac{2 \times 25 - (5)}{2} + (-5) \times (5)$
3. $= \frac{50 - (5)}{2} + (-5) \times (5)$
4. $= \frac{50 - (5)}{2} + (-25)$
5. $= -\frac{5}{2}$

Evaluate $\frac{2x^2 - y}{2} + xy$ when $x = -5$ and $y = 5$.

10. $-\frac{7}{2}$

1. Substitute $x = -1, y = 3$: $\frac{2 \times (-1)^2 - (3)}{2} + (-1) \times (3)$
2. $= \frac{2 \times 1 - (3)}{2} + (-1) \times (3)$
3. $= \frac{2 - (3)}{2} + (-1) \times (3)$
4. $= \frac{2 - (3)}{2} + (-3)$
5. $= -\frac{7}{2}$

Evaluate $\frac{2x^2 - y}{2} + xy$ when $x = -1$ and $y = 3$.