

SOL Warm-Up

Graphing Calculator Active

A.1 (a) Translating verbal expressions into algebraic expressions

1. Which of the following expressions represents 7 times a number decreased by 13?

A $7x + 13$
B $7x - 13$
C $13 - 7x$
D $13 + 7x$

2. Which of the following expressions represents 94 increased by twice a number?

A $2x + 94$
B $94 - 2x$
C $\frac{x}{2} - 94$
D $x - 188$

3. Which one of the following expressions represents 28 less than three times a number?

A $28 - 3x$
B $3x - 28$
C $28 + 3x$
D $3x + 28$

4. Which of the following expressions represents six times Bob's age decreased by 8 ?

A $8 - 6x$
B $6x + 8$
C $6x - 8$
D $8 + 6x$

SOL Warm-Up

Graphing Calculator Active

A.1(b) Translating verbal expressions into algebraic expressions

1. Which of the following expressions represents 42 less than four times a number?

A $42 + 4x$
B $4x - 42$
C $4x + 42$
D $42 - 4x$

2. Which of the following expressions represents the sum of 16 and five times a number?

A $5x - 16$
B $16 + 5x$
C $16x + 5$
D $16 - 5x$

3. Which one of the following expressions represents 14 inches shorter than 6 times Joe's height?

A $14 - 6x$
B $6x + 14$
C $6x - 14$
D $14 + 6x$

4. Which of the following expressions represents John's bowling score minus 19 pins?

A $19 - x$
B $x + 19$
C $19 + x$
D $x - 19$

SOL Warm-Up

Graphing Calculator Active

A.1 (c) Simplifying and evaluating expressions

1. Which of the following expressions represents the sum of 5 and a number divided by 3?

A $\frac{5}{x} + 3$

B $\frac{x}{5} + 3$

C $5 + \frac{x}{3}$

D $5 + \frac{3}{x}$

2. Which of the following expressions represents four less than the square of a number?

A $4 - x^2$

B $4 - 2x$

C $2x - 4$

D $x^2 - 4$

3. What is the value of $\frac{2n + m}{t}$ if $n = -8$, $m = 4$, and $t = 2$?

A 10

B -10

C 6

D -6

4. What is the value of $-10 - 4x$ if $x = -13$?

A -52

B -42

C 42

D 52

SOL Warm-Up
Graphing Calculator Active

A.1 (d) Relating a polynomial expression to a verbal expression

1. Which of the following verbal expressions represents $4x - 10$?

- A** 4 times a number increased by 10
- B** 10 more than 4 times a number
- C** 4 times a number decreased by 10
- D** 10 plus 4 times a number

2. Which of the following verbal expressions represents $2x + 9$?

- A** 9 increased by twice a number
- B** a number increased by nine
- C** twice a number decreased by 9
- D** 9 less than twice a number

3. Which of the following verbal expressions represents $x^2 + 2x$?

- A** the sum of a number squared and twice a number
- B** the sum of a number and twice the number
- C** twice a number less than the number squared
- D** the sum of a number and twice the number squared

SOL Warm-Up

Graphing Calculator Active

A.1 (e) Evaluating expressions

1. What is the value of $2x - 5y$ if $x = -3$ and $y = -5$?

- A - 31
- B -19
- C 19
- D 31

2. What is the value of $10 - 4x$ if $x = -13$?

- A - 62
- B -42
- C 42
- D 62

3. What is the value of $10 + 4x$ if $x = -13$?

- A - 62
- B -42
- C 42
- D 62

4. The perimeter (P) of a rectangle can be calculated by adding 2 times the length (l) to 2 times the width (w) or $P = 2l + 2w$. What is the perimeter of a rectangle that has a length of 16.3 and a width of 11.9?

- A 28.2
- B 193.97
- C 56.4
- D 8.8

SOL Warm-Up

Graphing Calculator Active

A.1 (f) Evaluating expressions

1. What is the value of $5k^3$ if $k = -4$?

A -8000

B -320

C -20

D 320

2. What is the value of $5r$ if $r = 4x^2$ and $x = -3$?

A -144

B 144

C 180

D 720

3. What is the value of $-5x^3 + x^2$ if $x = -3$?

A 126

B 135

C 141

D 144

4. What is the value of $10x^3 - x$ if $x = -2$?

A -80

B -78

C 80

D 82

5. What is the value of $4 + 3^x$ if $x = 3$?

A 13

B 16

C 27

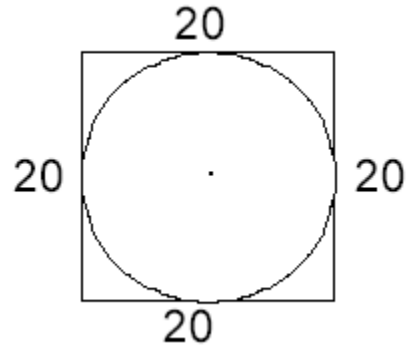
D 31

SOL Warm-Up Graphing Calculator Active

A.1 (g) Evaluating verbal quantitative situations if $\pi = 3.14$

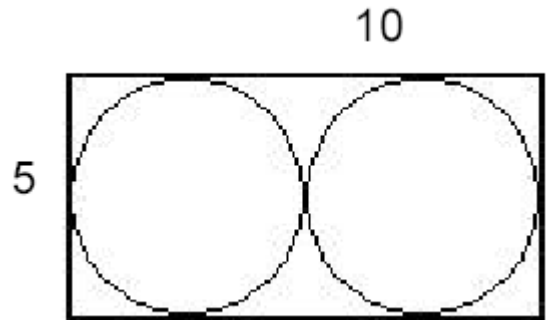
1. If a side of the square has length 20, what is the area of the circle?

- A** 1,257
- B** 314
- C** 125.6
- D** 68.8



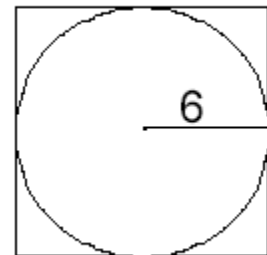
2. What is the combined area of the two circles?

- A** 19.63
- B** 157
- C** 39.25
- D** 62.8



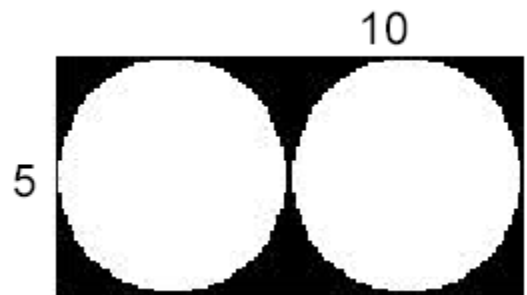
3. If the length of the radius of the circle is 6, what is the area of the square?

- A** 12
- B** 48
- C** 72
- D** 144



4. What is the area of the shaded region?

- A** 10.37
- B** 10.75
- C** 42.52
- D** 127.5



SOL Warm-Up

Graphing Calculator Active

A.1 (h) Evaluating verbal quantitative situations

1. The pay (P) at a certain job is calculated by multiplying the base pay (B) by the number of hours worked (h) ($P = Bh$). If an employee works more than 40 hours in 1 week, the formula changes to $P = 40B + 1.5B(h - 40)$. If Susan had base pay of \$12.50 and worked 46 hours, what would be her pay for the week?

- A \$525.00
- B \$575.00
- C \$597.00
- D \$612.50

2. The pay (P) at a certain job is calculated by multiplying the base pay (B) times the number of hours worked (h) ($P = Bh$). If a worker works more than 40 hours in 1 week, the formula changes to $P = 40B + 1.5B(h - 40)$. If Tom has base pay of \$6.35 and worked 28 hours, what would be his pay for the week?

- A \$ 175.00
- B \$ 177.80
- C \$ 186.50
- D \$ 266.70