


**1**

Before you click your answer, check with **at least** one other person. If you don't agree, check each step.



Step 1: Add 3 to 7  
 Step 2: Subtract 2 from 8  
 Step 3: Divide the result of step 1 by 5.  
 Step 4: Divide the result of step 2 by the result of step 3. This is your final answer.

**Expression:**  
 Step-by-step instructions to calculate a result.

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**2 Do the calculations:**

$$\frac{8 - 2}{\frac{3 + 7}{5}}$$

**Expression:**  
 Step-by-step instructions to calculate a result.

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**Expression:**  
 Step-by-step instructions to calculate a result.

**Value** (of an expression):  
 The result you should get when you calculate.

**Evaluate** (an expression):  
 Do the calculations as specified by the expression.

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**3**

Step 1: Add 5 to the height, in inches, of a nearby person. = 79

Step 2: Double the result of step 1. = 148

Step 3: Subtract 4 from the result of step 2. = 144

Step 4: Divide the result of step 3 by 2. = 72

Step 5: Subtract the height of that same person from the result of step 4. =  $\frac{69}{3}$   
 This is your final answer.

$$\frac{(\square + 5)2 - 4}{2} - \square$$

**An expression?**

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**4**

$$\frac{(x + 5)2 - 4}{2} - x$$

$x$  = the height, in inches, of a nearby person.

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**Constant:**  
 A quantity in an expression that has the same value every time you calculate.

**Variable:**  
 A quantity in an expression that doesn't have the same value every time you calculate.

When an expression contains a variable, you cannot evaluate the expression unless you know the value of the variable.

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**5 Evaluate the expression**

$$\frac{5x}{y} + y^2$$

given that  $x = 9, y = 3$ 

$$\frac{5x}{y} + y^2$$

$$= \frac{5 \cdot 9}{3} + 3^2$$

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**6 Evaluate the expression**

$$\frac{13x - 5y}{5}$$

given that  $x = 4, y = 2$ 

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**7 Evaluate the expression**

$$\frac{8x - 3y}{x + 7}$$

given that  $x = 5, y = 3$ 

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**8 Evaluate the expression**

$$(x + 4y)^2$$

given that  $x = 4, y = 2$ 

$$\begin{aligned} & (x + 4y)^2 \\ &= (4 + 4 \cdot 2)^2 \\ &= (4 + 8)^2 \\ &= 12^2 \\ &= 144 \end{aligned}$$

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**9 Evaluate the expression**

$$8y + \frac{65}{x}$$

given that  $x = 5, y = 7$ 

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**10 Evaluate the expression**

$$\frac{y}{z} + 2x^2$$

given that  $x = 6, y = 16, z = 8$ 

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**11 Evaluate the expression**

$$\frac{x^2 + z}{y^2 - -3z}$$

given that  $x = 4, y = 1, z = 11$

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**12**

Neglecting air resistance, the expression  $16t^2$  gives the distance in feet an object will fall in  $t$  seconds. Complete the chart below.

Time $t$ (in seconds)	Distance $16t^2$ (in feet)
$t = 1$	?
$t = 2$	
$t = 3$	

$$16 \cdot 1^2$$

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**13**

Neglecting air resistance, the expression  $16t^2$  gives the distance in feet an object will fall in  $t$  seconds. Complete the chart below.

Time $t$ (in seconds)	Distance $16t^2$ (in feet)
1	16
2	?
3	

$$16 \cdot 2^2$$

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**14**

Neglecting air resistance, the expression  $16t^2$  gives the distance in feet an object will fall in  $t$  seconds. Complete the chart below.

Time $t$ (in seconds)	Distance $16t^2$ (in feet)
1	16
2	64
3	?

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Vocabulary we learned today:

- Expression
- Value
- Evaluate
- Constant
- Variable

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