Remember that math is a language. Today we are going to practice saying and writing variable expressions in order to help us find equivalent expressions. Let’s review what makes up a variable expression. Write down at least 3 examples of variable expressions and give the parts.

Define Variable Expression from class: (Answers may vary.)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Expression** | **Coefficients** | **Variables** | **Constants** | **Terms** |
| $$2x+5$$ | $$2$$ | $$x$$ | $$5$$ | $2x$ **and** $5$ |
| $$3x-4y+7$$ | $3$ **and** $-4$ | $x$ **and** $y$ | $3$ **and** $-4$ | $3x, -4x$ **and** $7$ |
| $$x+5y+2z-1$$ | $1, 5 $**and 2** | $x, y $**and** $z$ | $$-1$$ | $x, 5y, 2z$ **and** $-1$ |

Write a variable expression to represent the pictures below.

**Expression:**

**3t**





**Expression:**

**6t**



**Expression:**

**9t**

# Activity: Find your Match

# You and your classmates will be given 5 minutes to finish the game.

1. You will be provided with one variable expression from the set of [Equivalent Expression Memory Cards](https://docs.google.com/document/d/1bPUsokeYYygaRBL4EUdTlReTJveYiLDhH2ud0JQC7Tc/edit?ts=5f0b0506).
2. You will hold it out in front of your classmates and try not to peek! Your teacher may put the card to your back. It’s not a big deal if your classmates see the expression you are holding.
3. It’s more fun if you ask another student what your card says. This helps build the language part of math!
4. When you find a match, say the equivalent expressions aloud and they should stay together as a pair.
5. When you find your pair by your equivalent expressions, you should sit together, and get a set of cards to play memory.

# Activity: Memory Game

1. You and your partner will get a full set of [Equivalent Expression Memory Card](https://docs.google.com/document/d/1bPUsokeYYygaRBL4EUdTlReTJveYiLDhH2ud0JQC7Tc/edit?ts=5f0b0506) (or devices to play the [online game with the cards](https://www.flippity.net/mg.php?k=1PFPVx1hxW3sJ6uJd_ZxeMliST06VwXl2IWtpaGG82FU)).
2. The paper cards will be laid face down on the table.
3. The goal of the game is to find as many equivalent expressions as you can.
4. Player 1 turns over 2 cards.
5. You say the expressions aloud and say whether they are equivalent or not.
6. If they are equivalent, keep the match and play again.
7. If they are not equivalent, the cards are turned back over and it’s the other player’s turn.
8. The game continues until the cards are all gone.
9. Players should record the equivalent expressions they collect on the [Find Your Match: Equivalent Expressions worksheet](https://docs.google.com/document/d/1edxLKvYl-3ZsUhtHrY7P47VbOLDxogQwf8ezaqX4xV0/edit?ts=5f0a78cd).
10. Count up the pairs and see who won!

|  |  |  |
| --- | --- | --- |
| **My Name:** |  | **My Partner’s Name:** |
|  | **=** |  |  |  | **=** |  |
|  | **=** |  |  |  | **=** |  |
|  | **=** |  |  |  | **=** |  |
|  | **=** |  |  |  | **=** |  |
|  | **=** |  |  |  | **=** |  |
|  | **=** |  |  |  | **=** |  |
|  | **=** |  |  |  | **=** |  |
|  | **=** |  |  |  | **=** |  |
|  | **=** |  |  |  | **=** |  |

**What was the hardest expression to match and why? Explain your answer. (Answers may vary.)**

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# Choose one of your matches and draw or write a word problem using those expressions.

# (Answers may vary.)

**Find your Match:** Equivalent Expressions Math 6

**Independent Practice**

Cut the expressions below. Glue them on the next page to match the equivalent expressions.

$$x+2x+4$$

$$3(x+1)$$

$$x+x+x$$

$$3x$$

$$3x+4$$

$$8x-2$$

$$10x-x$$

$$3x+3$$

$$2(4x-1)$$

$$9x$$

**Equivalent Expressions**

$$x+2x+4=3x+4$$

$$x+x+x=3x$$

$$10x-x=9x$$

$$2\left(4x-1\right)=8x-2$$

$$3\left(x+1\right)=3x+3$$

***Reflection (to be completed at the end of the activity)***

*What was the most difficult part of the activity? What did you learn or discover about equivalent expressions? (Answers may vary.)*