

Abstract: This paper provides an overview and research summary of Direct Instruction (DI) mathematics programs, specifically *DIS-TAR Arithmetic I* and

\dots $E_{n+1} = 1 - (E_n + 1 - n) = 1 - E_n - 1 + n = n - E_n$, & $E_{n+1} = 1 - n + E_n$.

\dots $E_{n+1} = 1 - n + E_n$.

Figure 1

EXERCISE 1 EQUALITY

$$\sum_{k=0}^n \binom{n}{k} = 2^n$$

$$\sum_{k=0}^n \binom{n}{k} = \sum_{k=0}^n \binom{n}{n-k}$$

$$\sum_{k=0}^n \binom{n}{k} = \sum_{k=0}^n \binom{n}{k}$$

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$$\sum_{k=0}^n \binom{n}{k} = 2^n$$

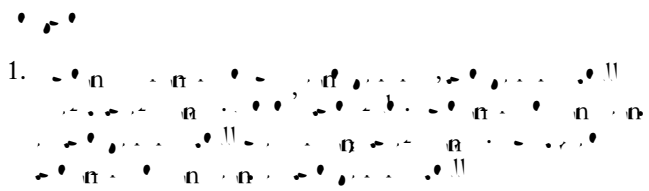
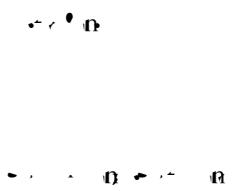
3 equals 3.

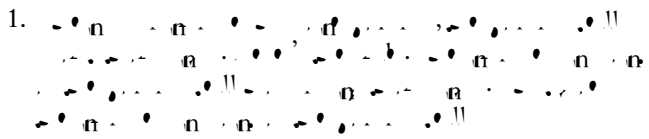

$$\sum_{k=0}^n \binom{n}{k} = 2^n$$

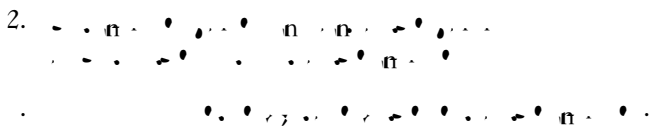
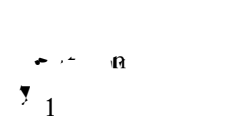
$$\sum_{k=0}^n \binom{n}{k} = 2^n$$

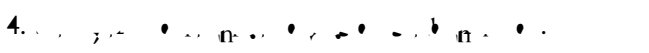

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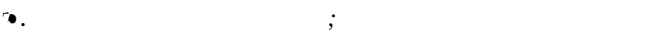

\dots $E_{n+1} = 1 - n + E_n$.






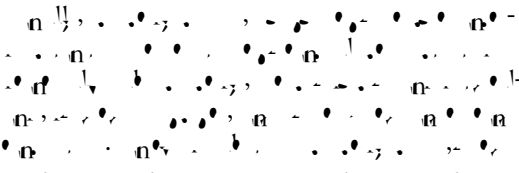
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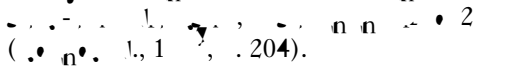
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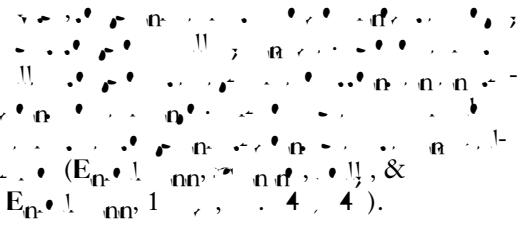
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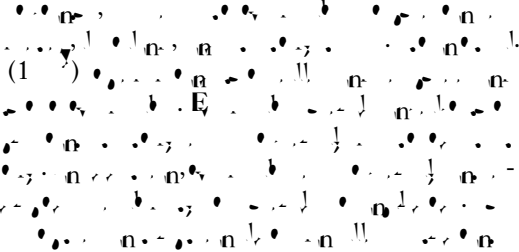
6.  

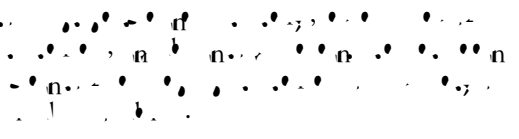



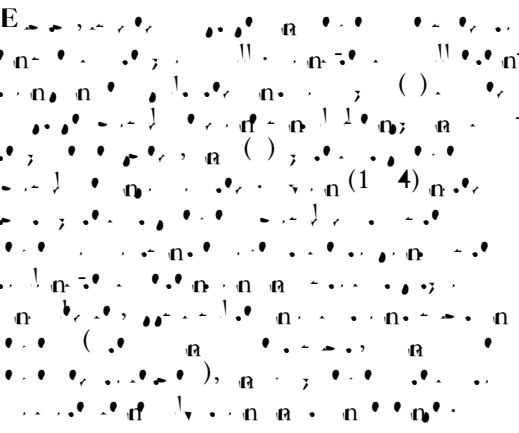


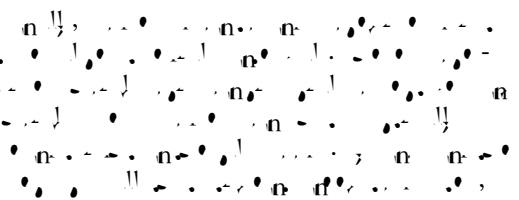












$f(x) = \frac{1}{x^2} - \frac{1}{x}$

(2000).

$f(x)$

Figure 4

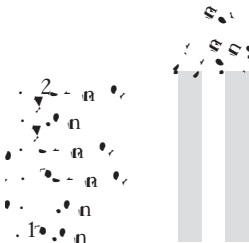
$f(x) = \frac{1}{x^2} - \frac{1}{x}$

Part 1
 Part 2
 Part 3
 Part 4
 Part 5
 Part 6
 Part 7
 Part 8

Part 1 **Part 2**

 _____, 11, _____, 12, _____

Part 3
 $\times 1$ $\times 2$ $\times 4$ $\times 2$ $\times 4$

Part 4 **Part 5**


Part 6
 _____ 20 _____
 _____ 2 _____ 1 1 _____

Part 7
 0 1 2 0 1 2

Part 8

E_{n-1} & E_{n-1}

Structure of DI Math Programs

1. $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

2. $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$

140. $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

141. $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$

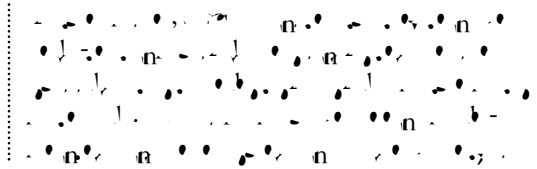
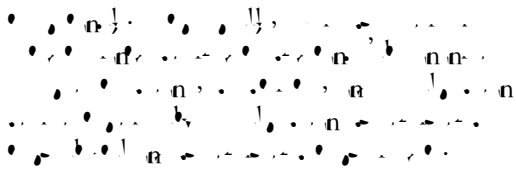
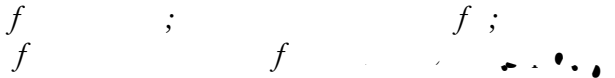


Figure 6



TASK 2 SYMBOL IDENTIFICATION
Introducing a New Symbol

point. Touch
E a

Group Activity

4



- a. This is a four. What is this? 4. Yes, this is a four.
- b. Is this a four? This is a four. Is this a four?

TASK 2 SYMBOL IDENTIFICATION
Introducing a New Symbol

point. Touch
E a

Group Activity

2

4

- a. This is a two. What is this? 2. Yes, this is a two.
- b. Is this a two? This is a two. Is this a two?

4

2

- c. Is this a four? 4.
- d. When I touch it, tell me what it is.
- e. Get ready.
- f. Individual Test

- c. Is this a two? 2.
- d. When I touch it, tell me what it is.
- e. () Get ready.
- f. Individual Test

E... (1...)

The first part of the study, a qualitative analysis of 100 interviews with mathematics teachers, revealed that many teachers reported a lack of confidence in their ability to teach mathematics. This was often linked to their own experiences of learning mathematics in school, which were often negative. Teachers also expressed a need for more professional development opportunities, particularly in the area of pedagogical strategies for mathematics.

The second part of the study, a quantitative analysis of 200 questionnaires, confirmed the findings of the interviews. It showed that 75% of teachers felt that their current training was insufficient for teaching mathematics. Furthermore, 60% of teachers reported that they felt less confident in their ability to teach mathematics than they did when they first started their careers.

The study also identified several factors that influenced teachers' confidence in their ability to teach mathematics. These included their own mathematical ability, their experience of teaching mathematics, and the quality of their professional development opportunities.

The findings of this study have several implications for the design of mathematics programs. First, it is important to provide teachers with opportunities to develop their mathematical skills and confidence. This can be done through a variety of methods, including workshops, seminars, and peer support groups. Second, it is important to provide teachers with opportunities to develop their pedagogical skills. This can be done through a variety of methods, including mentoring, coaching, and observation. Finally, it is important to provide teachers with opportunities to reflect on their own practice and to share their experiences with colleagues.

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Research Synthesis on DI Mathematics Programs

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Table 7

f f

<p>.....n</p> <p>&</p> <p>(1 0)</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>
<p>.....n</p> <p>(1 0)</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>
<p>.....n</p> <p>(1 1)</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>	<p>.....n</p> <p>.....n</p> <p>.....n</p>
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& ... 1 ... n... l, 1 1
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