Trampoline Party Anchor Papers

STUDENT A

For your birthday, you want to take a group of friends to an indoor trampoline center. There are two trampoline parks available on your date.

Pricing Information:

Sky High: $50 for up to 10 people and $5 per person after that.

Jump it Up: $70 for a party set up fee and $2 per person.

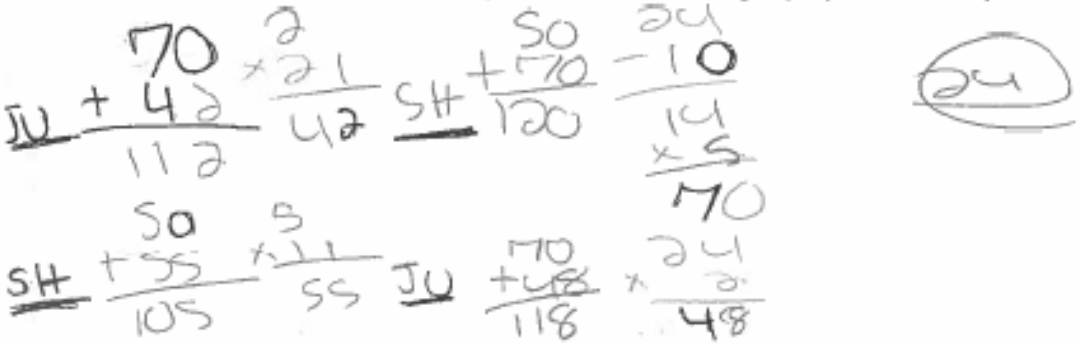
1. Which trampoline center would you choose for the following number of friends. Show all work and give justification for your solutions, including any representations you used.

   a. 15 friends Sky high (75) Jump it up 100

   b. 20 friends Sky high (70) Jump it up 110

   c. 25 friends Sky high 125 Jump it up (120)

2. What is the minimum number of friends for which Jump it Up is the less expensive choice. Show all work and give justification for your solutions, including any representations you used.



3. Based on your answer in part 2, use the pricing information given to model algebraically the situation where Jump it Up is less expensive than Sky High.

$70+2x<50+5x-10$

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STUDENT B

For your birthday, you want to take a group of friends to an indoor trampoline center. There are two trampoline parks available on your date.

Pricing Information:

Sky High: $50 for up to 10 people and $5 per person after that. $50 + $5(P)

Jump it Up: $70 for a party set up fee and $2 per person. $70 + $2(P)

1. Which trampoline center would you choose for the following number of friends. Show all work and give justification for your solutions, including any representations you used.

   a. 15 friends $50 + 5(5) = 75$
   $70 + 2(15) = 100$

   b. 20 friends $50 + 5(10) = 100$
   $70 + 2(20) = 110$

   c. 25 friends $50 + 5(15) = 125$
   $70 + 2(25) = 120$

2. What is the minimum number of friends for which Jump it Up is the less expensive choice. Show all work and give justification for your solutions, including any representations you used.

$50 + 5(14) = 120$ $70 + 2(24) = 118$

24

3. Based on your answer in part 2, use the pricing information given to model algebraically the situation where Jump it Up is less expensive than Sky High.

$70 + 2(P) < 50 + 5(P - 10)$

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Trampoline Party Anchor Papers

STUDENT C

For your birthday, you want to take a group of friends to an indoor trampoline center. There are two trampoline parks available on your date.

Pricing Information:

Sky High: $50 for up to 10 people and $5 per person after that.

Jump it Up: $70 for a party set up fee and $2 per person.

1. Which trampoline center would you choose for the following number of friends. Show all work and give justification for your solutions, including any representations you used.

a. 15 friends

50 + 25 = 75 (Sky High)

70 + 30 = 100 (Jump it up)

b. 20 friends

50 + 50 = 100 (Sky High)

70 + 40 = 110 (Jump it up)

c. 25 friends

50 + 75 = 125 (Sky High)

70 + 50 = 120 (Jump it up)

2. What is the minimum number of friends for which Jump it Up is the less expensive choice. Show all work and give justification for your solutions, including any representations you used.

22 friends, because Sky high becomes more expensive and Jump it up becomes less expensive.

3. Based on your answer in part 2, use the pricing information given to model algebraically the situation where Jump it Up is less expensive than Sky High.

He a $5 difference

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Trampoline Party Anchor Papers

STUDENT D

For your birthday, you want to take a group of friends to an indoor trampoline center. There are two trampoline parks available on your date.

Pricing Information:

Sky High: $50 for up to 10 people and $5 per person after that. $50+5(10-p)$

Jump it Up: $70 for a party set up fee and $2 per person. $70+2p$

1. Which trampoline center would you choose for the following number of friends. Show all work and give justification for your solutions, including any representations you used.

   a. 15 friends S. 50+25=75$
   J 70+30=100

   b. 20 friends S 50+50=100
   J 70+40=~~110~~ 110

   c. 25 friends S 50+50+25=125
   J 70+50=120

2. What is the minimum number of friends for which Jump it Up is the less expensive choice. Show all work and give justification for your solutions, including any representations you used.

21	50	5=105	21	70+42=112	24 friends
22	50	10=110	22	70+44=114	
23	50	15=115	23	70+46=116	
24	50	20=120	24	70+48=118	
25	50	25=125	25	70+50=120	

3. Based on your answer in part 2, use the pricing information given to model algebraically the situation where Jump it Up is less expensive than Sky High.

$70+2p-50+5(10-p)$

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STUDENT E

For your birthday, you want to take a group of friends to an indoor trampoline center. There are two trampoline parks available on your date.

Pricing Information:

Sky High: $50 for up to 10 people and $5 per person after that.

Jump it Up: $70 for a party set up fee and $2 per person.

1. Which trampoline center would you choose for the following number of friends. Show all work and give justification for your solutions, including any representations you used.

a. 15 friends

★ sky high - $50 + 25 = 75

Jump it up - $70 + 15 · 2 = 100

b. 20 friends

★ sky high - $50 + 50 = 100

Jump it up = $70 + 20 · 2 = 110

c. 25 friends

sky high - $50 + 75 = 125

★ Jump it up = $70 + 25 · 2 = 120

2. What is the minimum number of friends for which Jump it Up is the less expensive choice. Show all work and give justification for your solutions, including any representations you used.

Jump it up

(21) 70 + 21 · 2 = 112

(22) 70 + 22 · 2 = 114

(23) 70 + 23 · 2 = 116

★ (24) 70 + 24 · 2 = 118

sky high

50 + 55 = 105

50 + 60 = 110

50 + 65 = 115

★ 50 + 70 = 120

3. Based on your answer in part 2, use the pricing information given to model algebraically the situation where Jump it Up is less expensive than Sky High.

Jump it up → 70 + 2x

sky high

50 + 5(J - 10)

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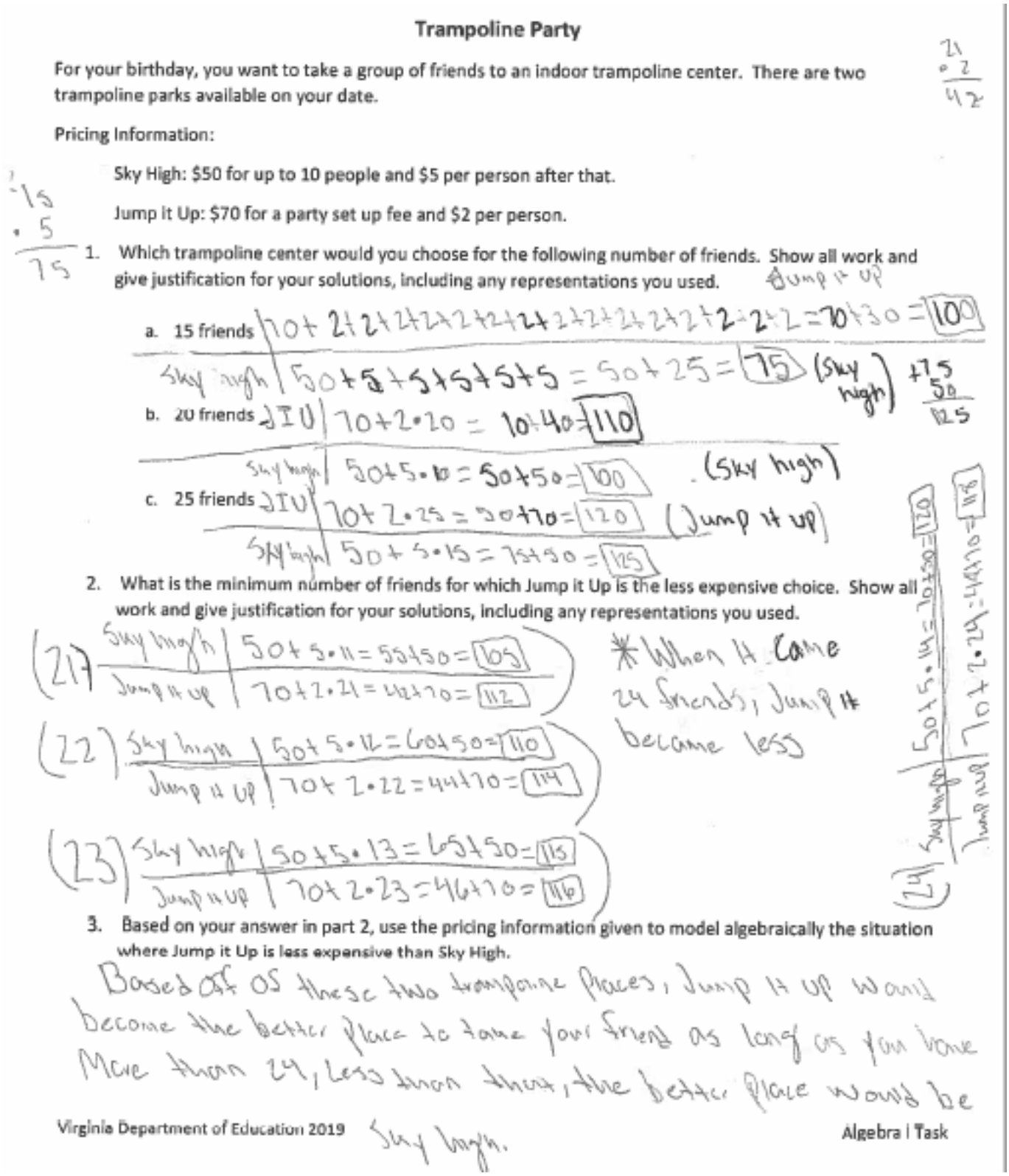
Trampoline Party Anchor Papers

STUDENT F



Trampoline Party

For your birthday, you want to take a group of friends to an indoor trampoline center. There are two trampoline parks available on your date.

Pricing Information:

Sky High: $50 for up to 10 people and $5 per person after that.

Jump It Up: $70 for a party set up fee and $2 per person.

1. Which trampoline center would you choose for the following number of friends. Show all work and give justification for your solutions, including any representations you used.

a. 15 friends — Jump it up: 70 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = 70 + 30 = 100

Sky High: 50 + 5 + 5 + 5 + 5 + 5 = 50 + 25 = 75 (Sky High)

b. 20 friends — Jump It Up: 70 + 2 · 20 = 70 + 40 = 110

Sky High: 50 + 5 · 10 = 50 + 50 = 100 (Sky High)

c. 25 friends — Jump It Up: 70 + 2 · 25 = 70 + 70 = 120 (Jump it up)

Sky High: 50 + 5 · 15 = 75 + 50 = 125

2. What is the minimum number of friends for which Jump it Up is the less expensive choice. Show all work and give justification for your solutions, including any representations you used.

(21) Sky High: 50 + 5 · 11 = 55 + 50 = 105 — Jump It Up: 70 + 2 · 21 = 42 + 70 = 112

(22) Sky High: 50 + 5 · 12 = 60 + 50 = 110 — Jump It Up: 70 + 2 · 22 = 44 + 70 = 114

(23) Sky High: 50 + 5 · 13 = 65 + 50 = 115 — Jump It Up: 70 + 2 · 23 = 46 + 70 = 116

(24) Sky High: 50 + 5 · 14 = 70 + 50 = 120 — Jump It Up: 70 + 2 · 24 = 48 + 70 = 118

*When it came 24 friends, Jump It became less

3. Based on your answer in part 2, use the pricing information given to model algebraically the situation where Jump it Up is less expensive than Sky High.

Based off of these two trampoline places, Jump it up would become the better place to take your friend as long as you have More than 24, less than that, the better place would be Sky high.

Virginia Department of Education 2019 — Algebra I Task

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