Radical Rocks Anchor Papers

STUDENT A

You and your friends are planning an adventure at Radical Rocks for a fun-filled day of rock climbing. The cost is $8 per hour plus $13 for full-day equipment rental. The rental includes a harness, shoes, belay device and a chalk bag.

Write an equation to represent your total cost for the day.

$y = 8x + 13$ x= hours

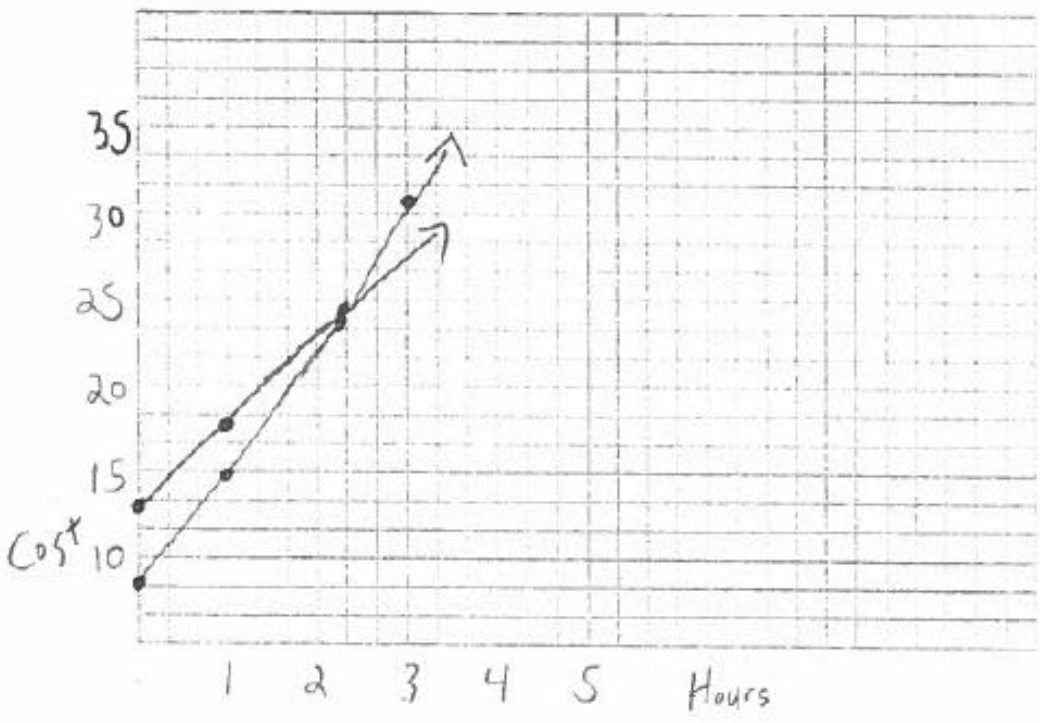
1) **You found an online coupon that offers a $6.00 discount on the full-day equipment rental. How does this change your equation above? Write a new equation.**

$y = 8x + 7$

2) **Your friend received a coupon in the mail offering a 40% discount off every hour? How does this change your equation above? Write a new equation.**

$y = 4.8x + 13$

3) **Graph the equations from Questions 1 and 2 above. Choose a scale and label the axes.**



STUDENT A Continued

4) **Which coupon offered the better deal? Use the graph to support your conclusion.**

40% off hourly climb

It is lower price after 3 hours.

5) **You have a total of $35.00 to spend. How many hours can you purchase for the day?**

- **Find the number of hours for both equations from Question 1 and 2 above.**

3 hours for #1
and
4 hours for #2

- **Does this support your conclusion from Question 4? Justify your answer.**

yes, I can climb for a longer period of time with #2

6) **Refer to your graph, did the two lines intersect?**

If so, what is the approximate coordinate for the point of intersection?

What does this point represent within the context of this problem?

yes, 22, #2 starts higher but isn't as expensive as #1 so it goes lower.

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STUDENT B

You and your friends are planning an adventure at Radical Rocks for a fun-filled day of rock climbing. The cost is $8 per hour plus $13 for full-day equipment rental. The rental includes a harness, shoes, belay device and a chalk bag.

Write an equation to represent your total cost for the day.

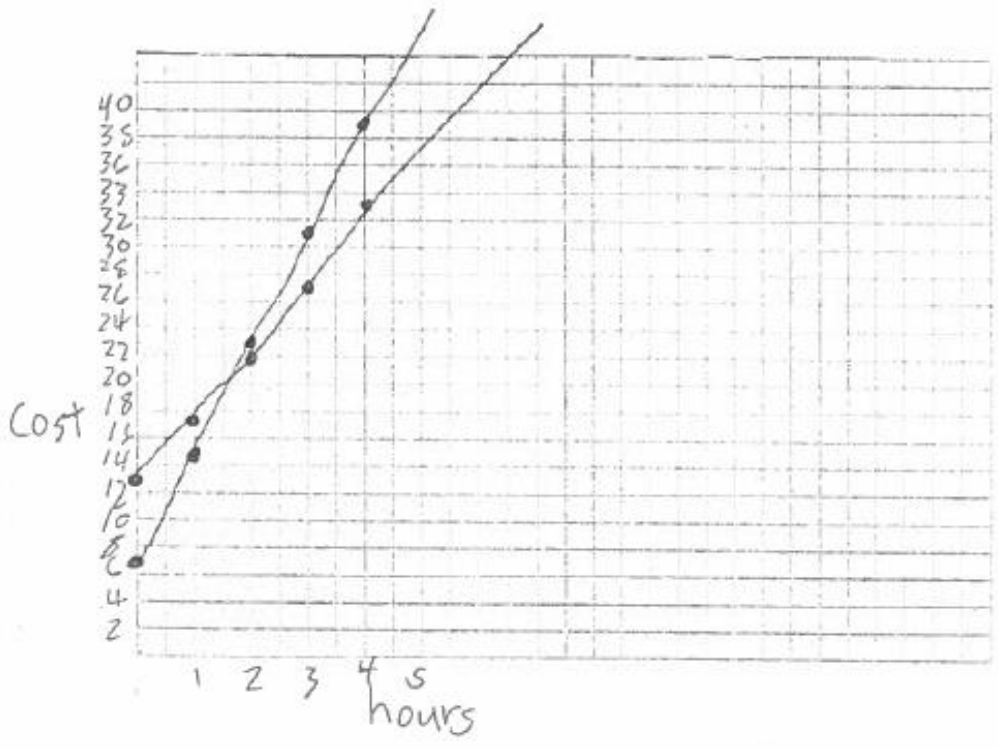
$y = 8x + 13$

1) **You found an online coupon that offers a $6.00 discount on the full-day equipment rental. How does this change your equation above? Write a new equation.** It changes it by taking 6 off from 13. $y = 8x + 7$

2) **Your friend received a coupon in the mail offering a 40% discount off every hour? How does this change your equation above? Write a new equation.** It takes $3.20 off of $8.00.

$y = 4.8x + 13$

3) **Graph the equations from Questions 1 and 2 above. Choose a scale and label the axes.**



STUDENT B Continued

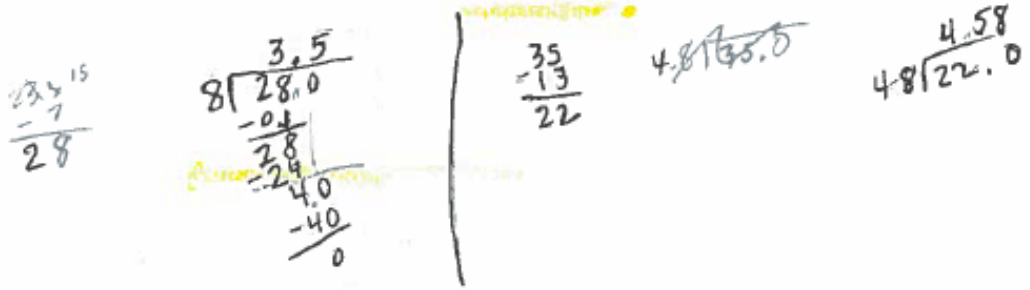
4) **Which coupon offered the better deal? Use the graph to support your conclusion.**

I am going to say question 1 offered the better deal. The $6 discount is better for less hours, but eventually the 40% discount becomes cheaper after the 1.875 hour mark. I guess the 40% discount would be better if you want to rock climb for 24 hours

5) **You have a total of $35.00 to spend. How many hours can you purchase for the day?**

3½ hours (question 1) & 4.58 hours (question 2)

- **Find the number of hours for both equations from Question 1 and 2 above.**



- **Does this support your conclusion from Question 4? Justify your answer.**

I guess it sort of does because the $6 discount allows you to rock climb a bit more than the 40% discount before it hits 2 hour mark

6) **Refer to your graph, did the two lines intersect?** Yes

If so, what is the approximate coordinate for the point of intersection? (1.875, 22)

What does this point represent within the context of this problem?

This is where the discounts would give the same amount of rock climbing hours for the same price.

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STUDENT C

You and your friends are planning an adventure at Radical Rocks for a fun-filled day of rock climbing. The cost is $8 per hour plus $13 for full-day equipment rental. The rental includes a harness, shoes, belay device and a chalk bag. 8x + 13

Write an equation to represent your total cost for the day.

1) **You found an online coupon that offers a $6.00 discount on the full-day equipment rental. How does this change your equation above? Write a new equation.**

8x + 13 - 6 → y = 8x + 7

2) **Your friend received a coupon in the mail offering a 40% discount off every hour? How does this change your equation above? Write a new equation.**

Dis
4.80

$8.00 − $4.80 → y = 3.20x + 7

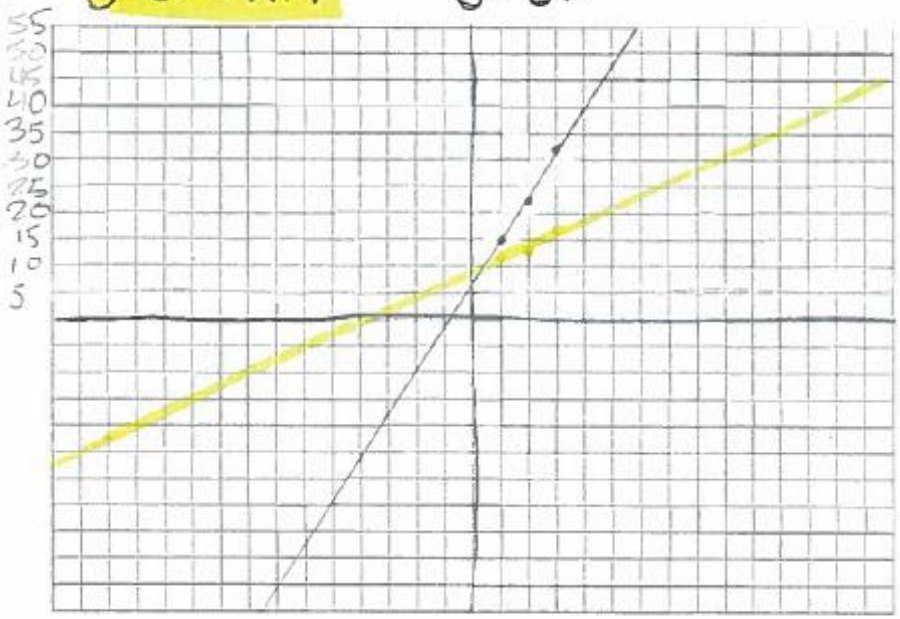
$\frac{x}{8} = \frac{40}{100}$ $\frac{320}{100} = \frac{100x}{100}$ 3.20 = x

3) **Graph the equations from Questions 1 and 2 above. Choose a scale and label the axes.**

y = 3.20x + 7 y = 8x + 7

x	y
1	10.2
2	13.4
3	16.6

x	y
1	15
2	23
3	31



STUDENT C Continued

4) **Which coupon offered the better deal? Use the graph to support your conclusion.**

The 40% off coupon

5) **You have a total of $35.00 to spend. How many hours can you purchase for the day?**

- **Find the number of hours for both equations from Question 1 and 2 above.**

$8x + 7 = 35$
$-7 \quad -7$
$\frac{8x}{8} = \frac{28}{8}$
$x = 3.50$

$3.20x + 7 = 35$
$-7 \quad -7$
$\frac{3.20x}{3.20} = \frac{28}{3.20}$
$x = 8.75$

- **Does this support your conclusion from Question 4? Justify your answer.**

Yes because you'd get more hours to purchase for the day for 40% with $35 then a $6 coupon for 3.50 hours with $35.

6) **Refer to your graph, did the two lines intersect?** Yes

If so, what is the approximate coordinate for the point of intersection? around (0.5, 2)

What does this point represent within the context of this problem? (x, y)

Yes, where both deals had the same cost.

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STUDENT D

You and your friends are planning an adventure at Radical Rocks for a fun-filled day of rock climbing. The cost is $8 per hour plus $13 for full-day equipment rental. The rental includes a harness, shoes, belay device and a chalk bag.

Write an equation to represent your total cost for the day.

$8h + 13 = y$

1) **You found an online coupon that offers a $6.00 discount on the full-day equipment rental. How does this change your equation above? Write a new equation.**

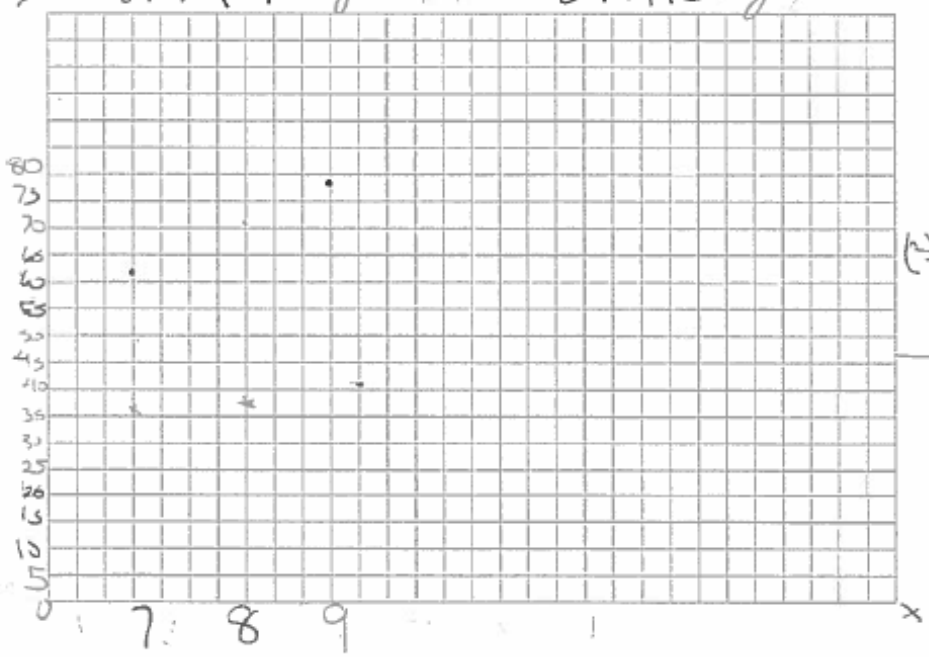
$8h + 7 = y$ It subtracts 6 from the 13.

2) **Your friend received a coupon in the mail offering a 40% discount off every hour? How does this change your equation above? Write a new equation.**

$8h \cdot .40 + 7 = y$ $3.2h + 7 = y$ Times .40 to the 4.

3) **Graph the equations from Questions 1 and 2 above. Choose a scale and label the axes.**

(1) $8h + 7 = y$ (2) $3.2h + 13 = y$



(1)

x	y
7	63
8	71
9	79

(2)

x	y
7	35.4
8	38.6
9	41.8

STUDENT D Continued

4) **Which coupon offered the better deal? Use the graph to support your conclusion.**

The 40% coupon

5) **You have a total of $35.00 to spend. How many hours can you purchase for the day?**

- **Find the number of hours for both equations from Question 1 and 2 above.**

$8h + 7 = 35$
$-7 \quad -7$
$\frac{8h}{8} = \frac{28}{8}$
$h = 3.5$

$3.2h + 13 = 35$
$-13 \quad -13$
$\frac{3.2h}{3.2} = \frac{22}{3.2}$
$h = 6.88$

- **Does this support your conclusion from Question 4? Justify your answer.**

no.

6) **Refer to your graph, did the two lines intersect?**

no

If so, what is the approximate coordinate for the point of intersection?

What does this point represent within the context of this problem?

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STUDENT E

You and your friends are planning an adventure at Radical Rocks for a fun-filled day of rock climbing. The cost is $8 per hour plus $13 for full-day equipment rental. The rental includes a harness, shoes, belay device and a chalk bag.

Write an equation to represent your total cost for the day.

$13 + $8 x $7 + $2x $13 - equipment rent $8 - Hour

1) **You found an online coupon that offers a $6.00 discount on the full-day equipment rental. How does this change your equation above? Write a new equation.**

$7 + $3x -3

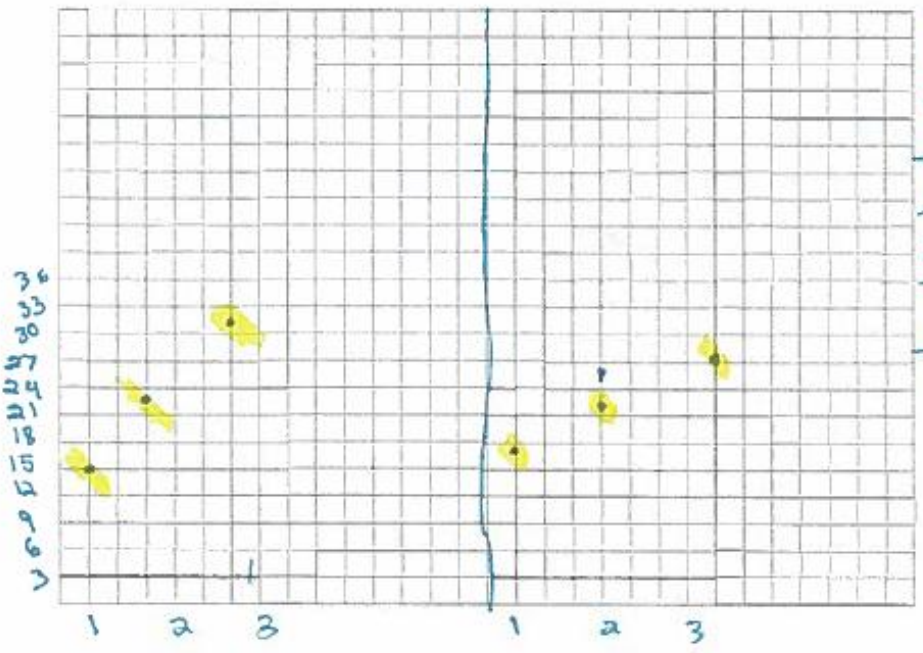
2) **Your friend received a coupon in the mail offering a 40% discount off every hour? How does this change your equation above? Write a new equation.**

$7 + $4.80x

3) **Graph the equations from Questions 1 and 2 above. Choose a scale and label the axes.**

7+8x

1	15
2	23
3	31



$13+$4.80x

1	17.8
2	22.6
3	27.4

STUDENT E Continued

4) **Which coupon offered the better deal? Use the graph to support your conclusion.**

The more hours you spent with the deals deal two worked out better but for one hour deal one worked better

5) **You have a total of $35.00 to spend. How many hours can you purchase for the day?**

- **Find the number of hours for both equations from Question 1 and 2 above.**

number 1

hour 1 $15
hour 2 $23
hour3 $31
hour 4 $39 wont work

number 2

1 hour 17.6
2 hours 22.6
3 hours 27.4
4 hours 32.2

- **Does this support your conclusion from Question 4? Justify your answer.**

Yes

6) **Refer to your graph, did the two lines intersect?**

Y<>

If so, what is the approximate coordinate for the point of intersection?

18

What does this point represent within the context of this problem?

where they would only met

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STUDENT F

You and your friends are planning an adventure at Radical Rocks for a fun-filled day of rock climbing. The cost is $8 per hour plus $13 for full-day equipment rental. The rental includes a harness, shoes, belay device and a chalk bag.

Write an equation to represent your total cost for the day.

$y = 8x + 13$

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1) **You found an online coupon that offers a $6.00 discount on the full-day equipment rental. How does this change your equation above? Write a new equation.**

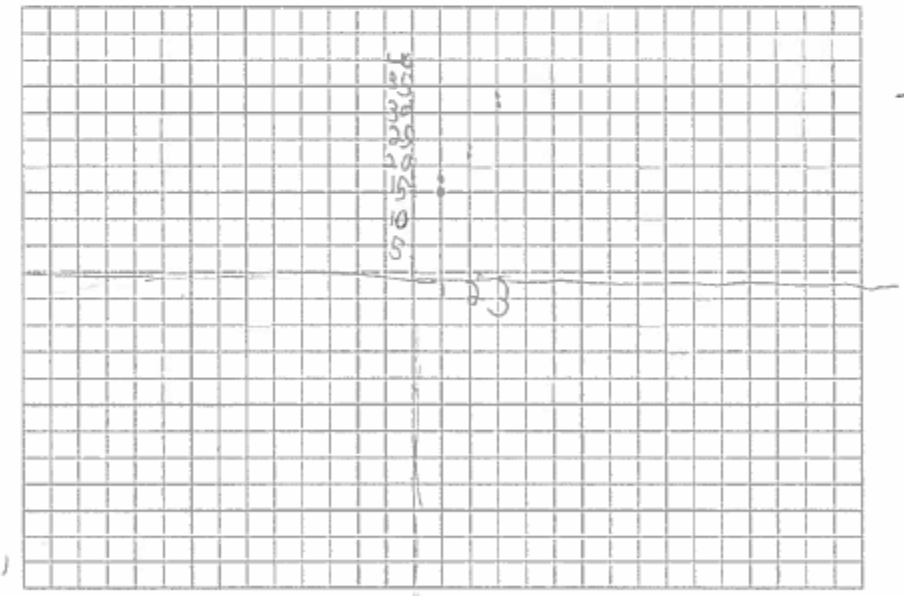
$y = 8x + 13 - 6$ $y = 8x + 7$

2) **Your friend received a coupon in the mail offering a 40% discount off every hour? How does this change your equation above? Write a new equation.** $\frac{x}{y}\ \frac{40}{100}$

$4.80 $y = 8x + 8.2$

3) **Graph the equations from Questions 1 and 2 above. Choose a scale and label the axes.**

x	y
1	15
2	23
3	31



x	y
1	16.2
2	24.2
3	32.2

STUDENT F Continued

4) Which coupon offered the better deal? Use the graph to support your conclusion.

the first one
it is more affordable

5) You have a total of $35.00 to spend. How many hours can you purchase for the day?

- **Find the number of hours for both equations from Question 1 and 2 above.**

3 times

- **Does this support your conclusion from Question 4? Justify your answer.**

Yes

6) Refer to your graph, did the two lines intersect?

If so, what is the approximate coordinate for the point of intersection?

What does this point represent within the context of this problem?

No