

ANSWER KEY

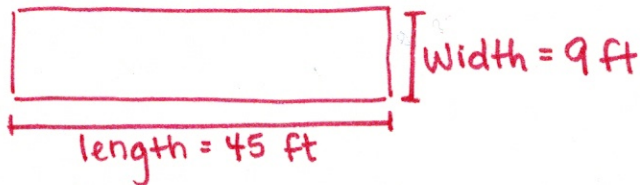
Name: _____ #: _____ Date: _____

Extra Practice: Unit 1 - Challenge Work

Multiplicative Comparison

1. A play area is 9 feet wide and 45 feet long. How many times longer is the length of the play area than the width?

Make a drawing to represent the problem:



45 ft is ? times longer than 9 ft?

Write an equation to represent the problem:

$$45 = 9 \times ? \quad \text{OR} \quad 9 \times ? = 45 \quad \text{OR} \quad 45 \div 9 = ?$$

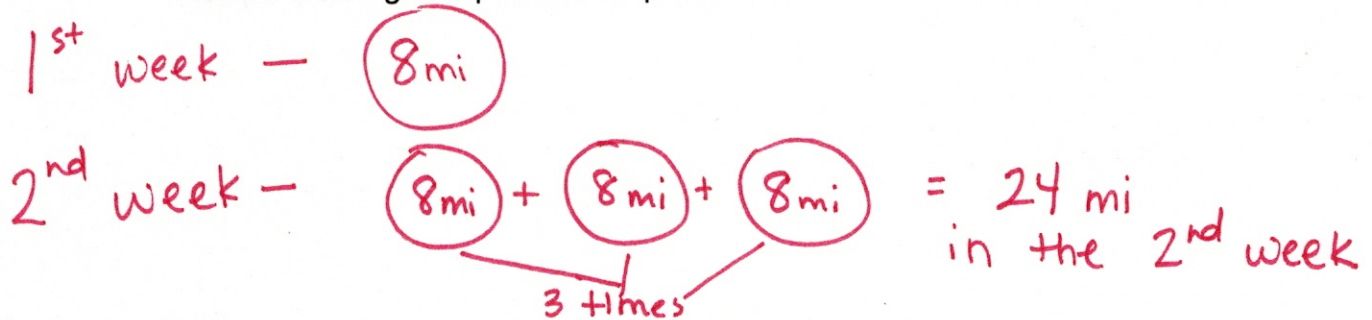
$$9 \times (5) = 45 \quad \text{OR} \quad 45 \div 9 = (5)$$

Answer: The length is 5 times longer than the width.

2. Huda is practicing for a race. In the first week, she ran 8 miles. In the second week, she ran three times as far as the first week. In the third week, she ran two times as far as the first week.

How many miles did Huda run the second week?

Make a drawing to represent the problem:

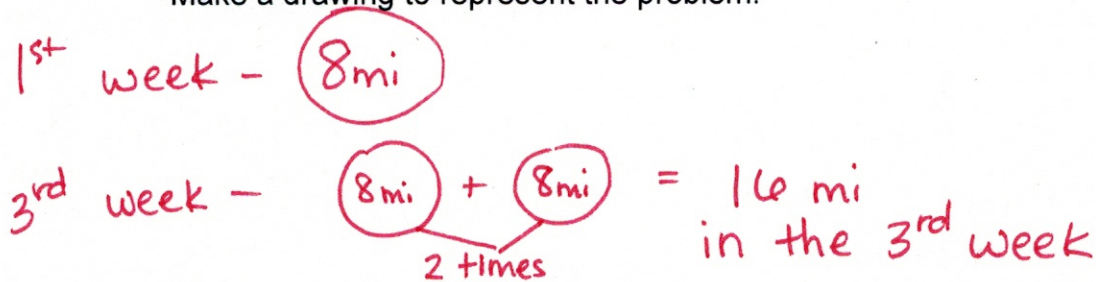


Write an equation to represent the problem:

$$8 \times 3 = 24 \text{ mi}$$

How many miles did Huda run the third week?

Make a drawing to represent the problem:



Write an equation to represent the problem:

$$8 \times 2 = 16 \text{ mi}$$

Factors and Multiples

3. Factors and multiples of 150.

150

Write down the dimensions for all the possible arrays for 150.

example: 1×150

$(1, 150)$

$(2, 75)$

$(3, 50)$

$(5, 30)$

$(6, 25)$

$(10, 15)$

List all the factors of 150.

1, 2, 3, 5, 6, 10, 15, 25, 30, 50, 75, 150

Is 150 prime or composite? Why?

Composite

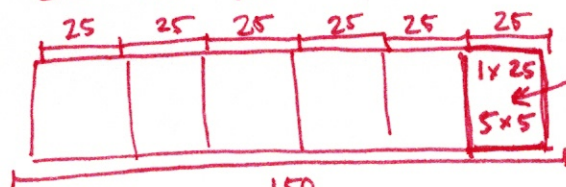
because it has more than 2 factors

List all the factors of 25.

1, 5, 25

Are there any factors of 25 that are not factors of 150? Why or why not?

No. All factors of 25 are also factors of 150 because 25 is a factor of 150.



All the factors that fit evenly in 25 will also fit evenly into 150

4. Which of the following are multiples of 7?

- 42
- 75
- 119
- 125
- 84

Use the chart below if you need to:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130

Prime & Composite

5. Are all even numbers prime? Why or why not? Use examples to explain.

No, even numbers are never prime because they always have 2 as a factor.

Example: 100 is even and NOT prime. Even if I don't know all the factors, I know the factors are at least (1, 100) and (2, something) because 100 is an even number. Since there are more than two factors, 100 is not prime.

6. Are all even numbers composite? Why or why not? Use examples to explain.

Yes, all even numbers are composite because 2 is always a factor.

(see example above)

7. Are all odd numbers prime? Why or why not? Use examples to explain.

No - some odd numbers are composite.

Example: 9 is an odd number. Its factors are 1, 3, and 9. It has more than two factors so it is a composite number (even though it's odd.)

8. Are all odd numbers composite? Why or why not? Use examples to explain.

No - some odd numbers are prime.

Example: 7 is an odd number and it is prime. Its only factors are 1 and 7.