

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Unit 1 Review

For each type of question, the achievement level is indicated. Showing work is an important strategy in communicating your knowledge and ideas so please be thorough.

**Learning Goal 1.1**

I can add and subtract integers.

1. Determine the value of each expression.

Developing			
a. $5 - 8$	b. $(-3) + (-5)$	c. $(-10) - 4$	d. $(-7) + 10$
e. $2 - (-12)$	f. $5 + (-3)$	g. $6 - (-6)$	h. $9 + (-9)$
i. $15 - 12$	j. $(-14) + 11$	k. $(-4) - 5$	l. $(-3) + (-8)$
m. $(-12) - 5$	n. $3 + 10$	o. $(-2) - (-7)$	p. $(-9) + 4$

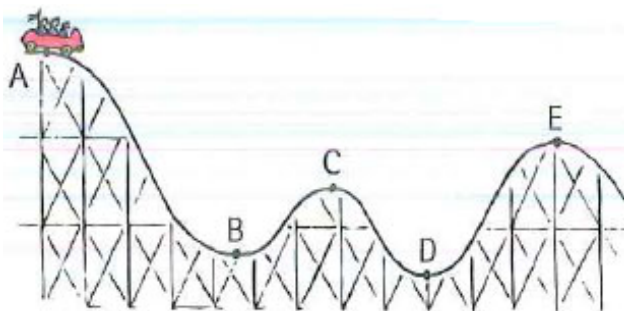
2. Draw a model representing each expression.

Proficient			
a. $5 - 8$	b. $(-3) + (-5)$	c. $(-10) - 4$	d. $(-7) + 10$
e. $2 - (-12)$	f. $5 + (-3)$	g. $6 - (-6)$	h. $9 + (-9)$
i. $15 - 12$	j. $(-14) + 11$	k. $(-4) - 5$	l. $(-3) + (-8)$
m. $(-12) - 5$	n. $3 + 10$	o. $(-2) - (-7)$	p. $(-9) + 4$

**Extending**

3. Joe is at the PNE on the roller coaster. Determine the height difference between all the given locations on the roller coaster.

Point	Time (seconds)	Height (metres)
A	0	100
B	40	20
C	60	50
D	90	10
E	120	75



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**Learning Goal 1.2**

I can multiply and divide integers.

1. Determine the value of each expression.

Developing			
a. $5 \times (-8)$	b. $(-3) \times (-5)$	c. $(-10) \times 4$	d. $7 \times 10$
e. $2 \times (-12)$	f. $5 \times (-3)$	g. $6 \times (-6)$	h. $(-3) \times (-8)$
i. $15 \div (-3)$	j. $(-24) \div 3$	k. $24 \div (-6)$	l. $(-45) \div (-9)$
m. $36 \div (-4)$	n. $40 \div 10$	o. $(-55) \div (-11)$	p. $(-36) \div 12$

2. Draw a model representing each expression.

Proficient			
a. $5 \times (-8)$	b. $(-3) \times (-5)$	c. $(-10) \times 4$	d. $7 \times 10$
e. $2 \times (-12)$	f. $5 \times (-3)$	g. $6 \times (-6)$	h. $(-3) \times (-8)$
i. $15 \div (-3)$	j. $(-24) \div 3$	k. $24 \div (-6)$	l. $(-45) \div (-9)$
m. $36 \div (-4)$	n. $40 \div 10$	o. $(-55) \div (-11)$	p. $(-36) \div 12$

Extending	
3. A forest fire destroys 1 square kilometre of land every 5 minutes. If the fire burns for one day, how much land has been destroyed?	
4. The new live action Mulan started strong with an initial viewership of one million people on the day it was released, September 4 <sup>th</sup> . The viewership has been decreasing by 10 000 people a day. How many people are expected to watch Mulan today (September 17)?	
5. Show how the model changes when you change the order of the numbers in the following multiplication statement. Use whichever model you prefer and explain yourself as clearly as possible.	
$(-2) \times (+5)$	versus $(+5) \times (-2)$
6. Show how the model changes when you change the signs of the number in the following division statement. Use whichever model you prefer and explain yourself as clearly as possible.	
$(-8) \div (+4)$	versus $(+8) \div (-4)$

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<b>Learning Goal 1.3</b>	I can apply order of operations to integers.
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1. Determine the value of each expression. Show all your work by evaluating only one operation per line of work.

Developing		
a. $(-2) + 9 \times 10$	b. $(-5) - (-3) \times (-4)$	c. $(-7) - 9 \div 3$
d. $5 + (-9) \times 9$	e. $2 + 3 \times 10$	f. $6^2 - (-8)$
g. $(-7) - 3^2$	h. $3 \times (8 + (-2))$	i. $(9 + 8) \times (-3)$
Proficient		
a. $8 - 5 \times 4^2$	b. $6 \times (5 - (-5) + 2) \div 8$	c. $3 \times (9 + (-8))^2$
d. $8 \div (7 - 9) \times (4 + (-4))$	e. $(7 - 8) \times 2^2$	f. $(8 \times (-4) - (-9) + (-7)) \div 3$
g. $9 \times (3 - 5 + (-2)) \div (-3)$	h. $(7 \times 8 - (-10)) \div 6 + (-6)$	i. $5 - (-4) \times (-3)^2$

Extending
2. Explain the difference in value between $-4^2$ and $(-4)^2$ .
3. Predict the sign of the expression $(-98)^{75}$ . Explain the reason for your prediction.