

Middle School - High School Sample tasks and student work:

Score 1:

For the following exercises, use the road signs shown:



33. Which sign has a shape that is not a polygon?
34. Describe the shape of the STOP sign as specifically as possible.
35. Which signs have the shape of a regular polygon?
36. Which signs have the shape of a polygon that is not regular?
37. Describe the shape of the YIELD sign as specifically as possible.
38. Describe the shape of the DEER CROSSING sign as specifically as possible.
39. Which sign is shaped like a polygon with a 60° angle?
40. Which sign has obtuse angles?

33. no entry

34. octagonal

35. yield, Deer

36. stop, 1-way

37. triangular

38. square

39. yield

40. stop

Score Level 2:

Simplify the following expressions. Remember to combine like terms if possible.

$$(4) \quad -8x^2 - 7 + 2x^2 + 11 - 6x^2$$

$$\quad \quad \quad -12x^2 + 4$$

$$(5) \quad 2abc - 7a^2bc + 4a^2bc - 10abc + 12ab - 18$$

$$\quad \quad \quad -8abc - 3a^2bc + 12ab - 18$$

$$(6) \quad -8(4x + 3) + 2(-7 + 5x)$$

$$\quad \quad \quad -32x - 24 - 14 + 10x$$

$$\quad \quad \quad -22x - 38$$

$$(7) \quad 6(2a - 4b) - 4(-3b - 7a)$$

$$\quad \quad \quad 12a - 24b + 12b + 28a$$

$$\quad \quad \quad 40a - 12b$$

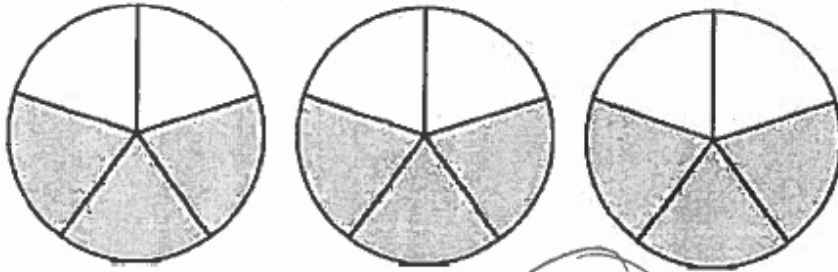
$$(8) \quad -3(8y - 2) + 5(-2y - 6) - 8(10 + 4y)$$

$$\quad \quad \quad -24y + 6 - 10y - 30 - 80 - 32y$$

$$\quad \quad \quad -66y - 104$$

Score Level 3

Write a number sentence that can be represented by this model?



$$3 \times \frac{3}{5} = \frac{14}{5}$$

Score Level 4:

2. I need to buy several jars of salsa for my Superbowl party. At Shop-n-Save, I can buy 6 jars for \$5.00. At Giant Eagle, I can buy 5 jars for \$4.50. Which is the better buy? JUSTIFY YOUR ANSWER!! Use the back if you need more room.

90 cent per can
 $5 \times 4.50 = 22.50$
 285 cent per can
 $6 \times 5.00 = 30.00$

5	4.50
10	9.00
15	13.50
20	18.00
25	22.50
30	27.00

6	5.00
12	10.00
18	15.00
24	20.00
30	25.00

Therefore Shop-n-Save is the best because it cost less per can and because if you get 30 can from each store, $(5 \times 6 = 30)$ Shop-n-Save cost less.