

Show all work on this paper. Do not write on the test.

1. ⁶ Case 1 Case 2

books	12	18	$\frac{12}{40} = \frac{18}{P}$	reduce $\frac{12 \div 4}{40 \div 4} = \frac{3}{10}$
pounds	40	P		

$\frac{3}{10} = \frac{18}{P}$ $\frac{3P}{3} = \frac{180}{3}$ $P = 60$

Prop. (1) W (1) A (2) L (1) **60 pounds**

2. ⁴

2.6	3.7
+ 4.8	2.7
7.4	1.4

W (2) A (2)

3.7

3. ⁴

P = 13	
8	W (1)
7	A (2)
+ 10	L (1)
38	

38 inches

4. ⁶

A = area A + area B

$\frac{(13)(8)}{2}$	+	$\frac{(7)(8)}{2}$
52	+	28
80		

W (3) A (2) L (1)

80 in²

5. ³

$9^2 - 19$

$81 - 3 = 78$

W (1) A (2)

78

6. ⁶

ratio	actual	4	G	4:50	(200)
boys	7	11	=	550	11 * 50 = 550
girls	4	6			(#1) (reduce)
total	11	550			ratio box (1) W (2) A (2) L (1)

OR #2 $\frac{4}{11} \cdot 550 = \frac{4(550)}{11} = 200$

200 girls

7. ⁷

$4.6 \text{ g} \cdot \frac{1000 \text{ mg}}{1 \text{ g}} = 4,600 \text{ mg}$

U.M. (1) W (1) A (2) L (1)

4,600 mg

8. ⁹

12	75	3	12
12	100	4	x3
12			36
12			

diagram (1) W (2) A (4) L (2)

a) 48 games

75% x 48 = $\frac{3}{4} \cdot 48 = 36$ b) 36 games

9. ¹¹

$72 = \frac{3}{4} \times Wn$

equation (1) W (1) A (2)

$\frac{4}{3} \cdot \frac{3}{4} = \frac{3}{4} \cdot \frac{4}{3} \times Wn$

$96 = Wn$

96

10. ⁴

$\frac{1}{10} \times Wn = 120$

equation (1) W (1) A (2)

$Wn = 1,200$

1,200

Test 15 B continued

11. 12

$$-8(-3) = 24$$

$$-6(+3) = -18$$

$$\frac{-8}{-2} = 4$$

$$\frac{9}{-3} = -3$$

- a) 24
- b) -18
- c) 4
- d) -3

OP/W = 4
A 8

12. 5

$$V = lwh$$

$$= (3\text{ cm})(3\text{ cm})(3\text{ cm})$$

$$= 27\text{ cm}^3$$

- 1 equation
- 1 substitution
- 2 A
- 1 L

$$27\text{ cm}^3$$

13. 10

$$C = \pi d$$

$$= (3.14)(20\text{ cm})$$

$$= 62.80$$

$$C = \pi d$$

$$= \pi(30\text{ in})$$

$$= 30\pi\text{ in}$$

- equation 2
- W 2
- A 4
- L 2

- a) 62.8 cm
- b) 30π in

14. 2

Fraction	Decimal	Percent
$\frac{1}{12}$	a) 0.08 $\bar{3}$	b) 8 $\frac{1}{3}\%$
$\frac{1}{20}$	0.35	d) 35%

- W 2
- A 8
- L 2

$$12\pi \cdot \frac{0.08\bar{3}}{100} = \frac{35}{100} \div 5 = \frac{7}{20}$$

15. 6

$$10m - (my - y^2)$$

$$m=6 \quad y=3$$

$$10(6) - (6(3) - 3^2)$$

substitution 1

$$60 - (18 - 9)$$

- W/steps 2
- A 2

$$60 - 9 = 51$$

$$51$$

16. 5

$$\frac{5}{4}y = 12$$

OP 1

$$\frac{4}{3}y = \frac{12}{1} \cdot \frac{4}{3}$$

W 2

$$y = 16$$

A 2

$$y = 16$$

17. 5

$$x + 2.6 = 5$$

$$x + 2.6 - 2.6 = 5 - 2.6$$

$$x = 2.4$$

- OP 1
- W 2
- A 2

$$x = 2.4$$

18. 5

$$\frac{7}{8} \div (4\frac{1}{6} + 2\frac{1}{2})$$

- OP 1
- steps/W 2
- A 2

$$\frac{15}{8} \div (4\frac{1}{6} + 2\frac{3}{6})$$

$$\frac{15}{8} \div (6\frac{4}{6}) \quad \frac{15}{8} \div \frac{40}{6} = \frac{15}{8} \cdot \frac{3}{40} = \frac{9}{32}$$

19. 5

$$(-6) - (-5) + (-4)$$

- OP 1
- steps/W 2
- A 2

$$-6 + 5 - 4$$

$$-1 - 4$$

$$-5$$

20. 2

B cone

- A 2