Warm Up Grade 7

Date: _____

BEDMAS

1) 2.53 x 7.1 +2.4÷0.3 -1

17.963 + 2.4÷0.3 −1

17.963 + 8 −1

25.963 −1

24.963

Step1

$$\begin{array}{r} 2.53 \\ \times\ 7.1 \\ \hline 253 \\ +\ 1771\text{x} \\ \hline 17.963 \end{array}$$

Step2

$$0.3\overline{)2.4} \rightarrow 3\overline{)24}\ \ 8,\ -24,\ 0$$

Step3

$$\begin{array}{r} 17.963 \\ 8.000 \\ \hline 25.963 \end{array}$$

Step4

$$\begin{array}{r} 25.963 \\ -\ 1.000 \\ \hline 24.963 \end{array}$$

2) Model (-2) x (-4) = (+8)

remove 2 groups of 4 unshaded

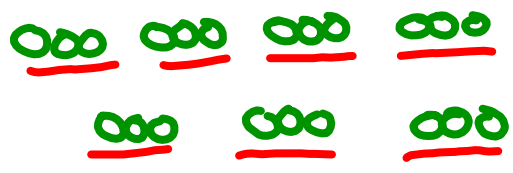


= 

b) (-3) x (+7) = (-21)

Same as (+7) x (-3)

Put down 7 groups of 3 unshaded



3) Answer the following:

a) (-17) x (-26) = (+442)

Box

	20	6
10	10x20 = 200	6x10 = 60
7	7x20 = 140	7x6 = 42

200 + 140 + 60 + 42 = 442

Stack

$$\begin{array}{r} {}^{1}17 \\ \times\ 26 \\ \hline 102 \\ +340 \\ \hline 442 \end{array}$$

b) (+11) x (+9) = (+99)

Study Rules X mult

Same Sign ⇒ +

Different sign ⇒ −

Warm Up Grade 7

Date: _____

BEDMAS

1) 2.53 x 7.1 +2.4÷0.3 -1

= 17.963 + 2.4 ÷ 0.3 - 1

= 17.963 + 8 − 1

= 25.963 − 1

= 24.963

Step1 Multiply

2.53 x 7.1

$$\begin{array}{r} {}^{3}\,{}^{2} \\ 2.53 \\ \times\ \ 7.1 \\ \hline 253 \\ +\ 17710 \\ \hline 17.963 \end{array}$$

Step2 Divide

2.4 ÷ 0.3 ← Not whole

24 ÷ 3 = 8

Step3

17.963

$$\begin{array}{r} +\ 8.000 \\ \hline 25.963 \end{array}$$

2) Model (-2) x (-4)

Remove 2 groups of neg 4

Redraw answer

= ....

(+8)

b) (-3) x (+7) (+7) x (-3)

= (-21)

3) Answer the following:

a) (-17) x (-26) ← Box

= (+442)

b) (+11) x (+9)

= (+99)

	10	7
20	20 x 10 = 200	7 x 20 = 140
6	6 x 10 = 60	6 x 7 = 42

200
140
60
42
442

Sheet 30 Bm+Δ

1) $(14-2)\times 3$

12×3

36

2) $35 \div (5+2)$

$35 \div 7$

5

3) $2 \times (7+3)+5$

$2 \times 10 + 5$

$20 + 5$

25

4) $35 \div (5+2) - 4$

$35 \div 7 - 4$

$5 - 4$

1

5) $14 - 2 \times 3$

$14 - 6$

8

6) $35 \div 5 + 2$

$7 + 2$

9

7) $2 \times 7 + 3 + 5$

$14 + 3 + 5$

22

8) $35 \div 5 + 2 - 4$

$7 + 2 - 4$

$9 - 4$

5

9) $81 \div 9 + 3 \times 4$

$9 + 3 \times 4$

$9 + 12$

21

10) $63 \div 7 \div 3 + 8$

$9 \div 3 + 8$

$3 + 8$

11

11) $24 \div 6 \times 2 - 3$

$4 \times 2 - 3$

$8 - 3$

5

12) $4 + 18 \div 3 + 5 \times 2$

$4 + 6 + 5 \times 2$

$4 + 6 + 10$

20

13)
$3 \times (4 - 2) = 6$
3×2
6

14)
$42 \div (6 + 1) = 6$
$42 \div 7$
6

15)
$(8 - 3) \times (4 + 6) = 50$
5×10
50

16)
$12 \times (6 - 3) \div 9 = 4$
$12 \times 3 \div 9$
$36 \div 9$
4

17)
$48 \div 6 + 2 \times 9 = 26$
$8 + 2 \times 9$
$8 + 18$
26

18)
$(4 + 6) \times 2 \div 5 = 4$
$10 \times 2 \div 5$
$20 \div 5$
4

Part B

1a) $4.6 + 5.1 - 3.2$

$9.7 - 3.2$

6.5

$4.6 + 5.1 = 9.7$

$9.7 - 3.2 = 6.5$

b) $8 - 3.6 \div 2$

$8 - 1.8$

6.2

$3.6 \div 2 = 1.8$

$8 - 1.8 = 6.2$

c) $46.4 - 10.8 \times 3$

$46.4 - 32.4$

14

$10.8 \times 3 = 32.4$

$46.4 - 32.4 = 14.0$

d) $85.6 \div 0.4 \times 7$

214×7

1498

$85.6 \div 0.4 = 214$

$214 \times 7 = 1498$

---

2) $2.5 \times 4 + 9.2 \div 0.1 - (21 - 15)$

$2.5 \times 4 + 9.2 \div 0.1 - 6$

$10 + 9.2 \div 0.1 - 6$

$10 + 92 - 6$

$102 - 6$

$= 96$

Showing Work

Step 1

$21 - 15 = 6$

Step 2

$2.5 \times 4 = 10.0$

Step 3

$9.2 \div 0.1 = 92$

$102 - 6 = 96$

6. Use front-end estimation to place the decimal point in each answer.

a) $32.47 - 6.75 = 25.72$

b) $118.234 + 19.287 = 137.521$

c) $17.9 - 0.8 = 17.1$

a) $\begin{array}{r} 32 \\ -\ 6 \\ \hline 26 \end{array}$

b) $\begin{array}{r} 118 \\ +\ 19 \\ \hline 137 \end{array}$

c) $\begin{array}{r} 17 \\ -\ 0 \\ \hline 17 \end{array}$

6. a) $32.47 - 6.75 = 25.72$

$\approx 32 - 7 = 25$

b) $118.234 + 19.287 = 137521$

$\approx 120 + 20 = 140$

c) $17.9 - 0.8 = 17.1$

$\approx 18 - 1 = 17$

7. Winsome is being trained as a guide dog for a blind person.
At birth, she had a mass of 0.475 kg.
At 6 weeks, her mass was 4.06 kg.
From 6 weeks to 12 weeks, she gained 5.19 kg.

a) By how much did Winsome's mass change from birth to 6 weeks?

b) What was her mass at 12 weeks?

B ⇒ 0.475 kg
6 week ⇒ 4.06 kg

$\begin{array}{r} 3\ 9\ 15 \\ 4.0\not{6}\ 0 \\ -\ 0.475 \\ \hline 3.585 \end{array}$

From birth to 6 weeks Winsome gained 3.585 kg

7. a) 6 week
Birth

$\begin{array}{r} 3\ 9\ 15 \\ 4.0\not{6}\ 0 \\ -\ 0.475 \\ \hline 3.585 \end{array}$ kg weight gain from birth–6 weeks

b) $\begin{array}{r} {\scriptstyle 1} \\ 4.06 \\ +\ 5.19 \\ \hline 9.25 \end{array}$ kg at 12 weeks

8. Estimate to place the decimal point in each product.
Show your estimation strategy.

a) $9.3 \times 0.8 = 7.44$

b) $3.62 \times 1.3 = 4.706$

c) $11.25 \times 5.24 = 58.95$

Round

$9 \times 0 = 0$ or $9 \times 1 = 9$

$3 \times 1 = 3$

$11 \times 5 = 55$

8 a) $9.3 \times 0.8 = 7.44$

$\approx 9 \times 1 = 9$

Actual $\begin{array}{r} {\scriptstyle 2}9.3 \\ \times\ 0.8 \\ \hline 7.44 \end{array}$

b) $3.62 \times 1.3 = 4.706$

$\approx 4 \times 1 = 4$

$\begin{array}{r} {\scriptstyle 3.62} \\ \times\ 1.3 \\ \hline 1086 \\ +3620 \\ \hline 4.706 \end{array}$

c) $11.25 \times 5.24 = 58.95$

$\approx 11 \times 5 = 55$

$\begin{array}{r} {\scriptstyle 1\ 2\ 4} \\ 11.25 \\ \times\ 5.24 \\ \hline 4500 \\ 22500 \\ 562500 \\ \hline 58.9500 \end{array}$

9. A rectangular park has dimensions 2.84 km by 3.5 km.
What is the area of the park?

9. $A = l \times w$
$= 2.84 \times 3.5$

$2.84 \approx 3 \times 3 = 9$

$$\begin{array}{r} {\scriptstyle 1}\,{\scriptstyle 2}\,{\scriptstyle 1} \\ 2.84 \\ \times\ 3.5 \\ \hline 1420 \\ 8520 \\ \hline 9.940 \end{array}$$

3.6 **11.** Evaluate.

a) $5.9 + 3.7 \times 2.8$

b) $12.625 \times (1.873 + 2.127)$

c) $2.1 \div 0.75 + 6.38 \times 2.45$

11) a) $5.9 + 3.7 \times 2.8$

$5.9 + 10.36$

16.26

Step 1

$$\begin{array}{r} {\scriptstyle 5}\,{\scriptstyle 1} \\ 3.7 \\ \times\ 2.8 \\ \hline 296 \\ +740 \\ \hline 10.36 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1} \\ 10.36 \\ +\ 5.90 \\ \hline 16.26 \end{array}$$

b) $12.625 \times (1.873 + 2.127)$

4.000

12.625×4

50.5

$$\begin{array}{r} {\scriptstyle 1}\,{\scriptstyle 1}\,{\scriptstyle 1} \\ 1.873 \\ +\ 2.127 \\ \hline 4.000 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1}\,{\scriptstyle 2}\,{\scriptstyle 1}\,{\scriptstyle 2} \\ 12.625 \\ \times\ \ \ 4 \\ \hline 50.500 \end{array}$$

c) $2.1 \div 0.75 + 6.38 \times 2.45$

$2.8 + 6.38 \times 2.45$

$2.8 + 15.6310$

18.4131

$0.75 \overline{)\,2.10}$ (×100, ×100)

$$\begin{array}{r} 2.8 \\ 75 \overline{)\,210.0} \\ -150 \\ \hline 60\,0 \\ -600 \\ \hline 0 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1}\,{\scriptstyle 1} \\ 6.38 \\ \times 2.45 \\ \hline {\scriptstyle 1}\,{\scriptstyle 3}\,{\scriptstyle 1}\,{\scriptstyle 9}\,0 \\ 2\,5\,5\,2\,0 \\ +1\,2\,7\,6\,0\,0 \\ \hline 15.6310 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1} \\ 15.631 \\ +\ 2.800 \\ \hline 18.431 \end{array}$$

Class/Homework

Test Tomorrow

Test Review Worksheet

Worksheet solutions is on the next page

Solutions

Part A – Multiple Choice

A 1. (+) x (-) is always what as a product?
(a) (-) (b) (+) (c) Depends on the numbers (d) 0

C 2. The sum of 123.45 AND 2.7
(a) 120.75 (b) 125.15 (c) 126.15 (d) 133.315

123.45
+ 2.70
126.15

B 3. 62.7 x 12.16 would have what as the solutions? (Use decimal place or estimation)
(a)7624.32 (b) 762.432 (c) 762432 (d) 76.2432

60x 10 = 600 so B

D 4. What is (-15) x (-3) equal to ?
(a) (-18) (b) (-45) (c) (-12) (d) (+45)

B 5. Find the difference of 14.001 and 5.39 using rounding to the ones place.
(a) 13.462 (b) 8.611 (c) 9.61 (d) IDK

14.001
- 5.390
8.611

D 6. In the question, 9.32 – 6.85 ÷ 7 + 21 x 6.7, which operation would you do first?
(a) addition (b) subtraction (c) multiplication (d) division

Part B – You must <u>show work</u> in order to obtain full value.

BEDMAS

1. Model the following integer multiplication with tiles
(a) (+7) x (-4) (b) (-3) x (-6)



2) Find the product of the following:
a) (-8) (-7) b) (+7) (-12) c) (+4) (+11) d) (-8) (+2)

= ●● ●●●●●●●●●●●

3) Use the distributive method to evaluate the following:
a) (-24) x (+70) = (-1680) b) (-86) x (-21)= (+1806)

=(+56) =(-84) =(+44) =(-16)

70	
20	20 x 70 = 1400
4	4 x 70 = 280

1400 + 280 = 1680

20	1
80	20 x 80 = 1600	80 x 1 = 80
6	6 x 20 = 120	6 x 1 = 6

1600 + 120 + 80 + 6 = 1806

Part B – You must show work in order to obtain full value.

1. Round each decimal to the hundredths place

(a) ~~7.649~~ 7.65 (b) ~~12.198~~ 12.20 (c) 0.1244 → 0.12

tenths hundredths

4) Add the following

a) 21.6 + 7.258

21.6 + 7.258 = 28.858

b) 2.8 + 154.

2.8 + 154.0 = 156.8

5) Subtract the following

a) 167.2 – 12.47

167.2 − 12.47 = 154.73

b) 14.7 – 0.6

14.7 − 0.6 = 14.1

6) Find the actual answer

(a) 3.56 x 0.3

hint 356 x 3

3.56 x 0.3 = 1.068

(b) 1.689 ÷ 0.3 →

16.89 ÷ 3 = 5.63

5.63
3 | 16.89
-15
18
-18
09
-9
0

7) Evaluate(no calculators).

BEDMAS

(a) 31 – (7+5) ÷ 4 +10

31 − 12 ÷ 4 + 10

31 − 3 + 10

28 + 10

38

BEDMAS

(b) 10 + 61.2 x 0.3 + 12.96 ÷ 0.4 – 1

(Show work on side of the paper)

10 + 18.36 + 12.96 ÷ 0.4 − 1

10 + 18.36 + 32.4 − 1

28.36 + 32.4 − 1

60.76 − 1

59.76

Step 1

61.2
x 0.3
18.36

Step 2 12.96 ÷ 0.4

32.4
4 | 129.6
-12
09
-8
16
-16
0

Step 3 10 + 18.36 = 28.36

Step 4

28.36
+ 32.40
60.76

Pg 121

5) Sum of 3.41

1.21 + 2.2 = 3.41

$$\begin{array}{r} 3.41 \\ -1.21 \\ \hline 2.20 \end{array}$$ ← many solutions so

6) $$\begin{array}{r} 9 \\ 10.49 \\ -\ 9.77 \\ \hline 0.72 \end{array}$$

Difference of 0.72 seconds

7) a) 7.65/h

works 15.5 h

$$\begin{array}{r} {\scriptstyle 3\ 2} \\ 7.65 \\ \times\ 15.5 \\ \hline 13825 \\ 38250 \\ +\ 76500 \\ \hline 118.575 \end{array}$$

Kiah makes $118.58 for working 15.5 hours

7b) 15.5 ÷ 2 →

$$2\overline{)\begin{array}{r} 7.75 \\ 15.50 \\ 14\downarrow\ \downarrow \\ \hline 1\ 5 \\ 1\ 4\downarrow \\ \hline 1 \end{array}}$$

← hours in that week

$$\begin{array}{r} {\scriptstyle 3\ 2} \\ 7.75 \\ \times\ 15.5 \\ \hline {\scriptstyle 2}\ 38\ 75 \\ 38750 \\ +\ 77500 \\ \hline 120.125 \end{array}$$

for working half the time Kiah gets $120.13

pg 121

8) 7.59 × 1.2

15 18
75 90
$9.108

6.29 × 1.2

1258
+6290
7.548

$9.108 − 7.548 = 1.560

Saves $1.56

10) 0.6 ⟌ 3.75 ⇒ 6 ⟌ 37.500

36 ↓
15
12
30
30
0

11) a) 8.11 + 6.75 × 5.2 − 2.12

8.11 + 35.1 − 2.12

43.21 − 2.12

41.09

3 2
6.75
× 5.2
1350
33750
35100

8.11 + 35.10 = 43.21

43.21 − 2.12 = 41.09

b) 3.78 × 2.25 − 4.028 ÷ 1.52

8.505 − 4.02 ÷ 1.52

8.505 − 2.65

5.855

3.78
× 2.25
1890
7560
75600
85050

2.65
152 ⟌ 402.80
−304
980
912
760
760
0

14
7 8.505
−2.650
5.855