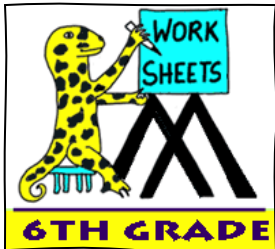


MATH SALAMANDERS

6TH GRADE MATH GRAB PACK

SPRING EDITION

ANSWERS



- This is the **answer pack** for our 6th Grade Math Grab Pack Fall Edition.
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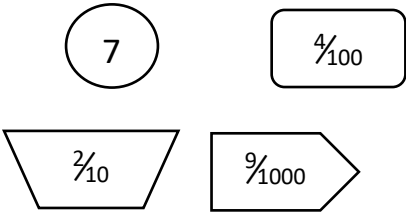
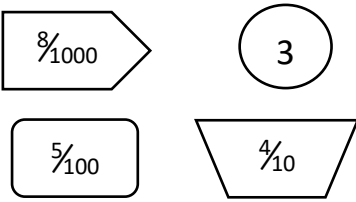
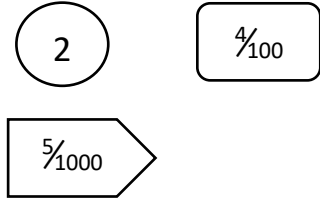
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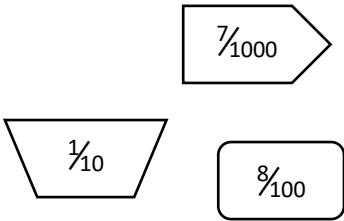
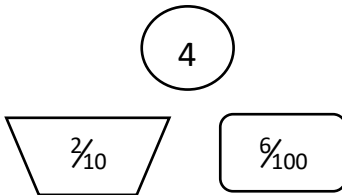
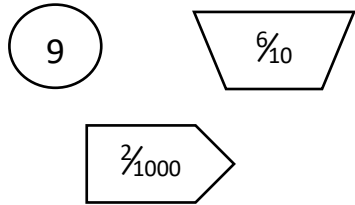
Use the link below to give us some feedback on our pack – we are always looking to improve the quality of our resources!

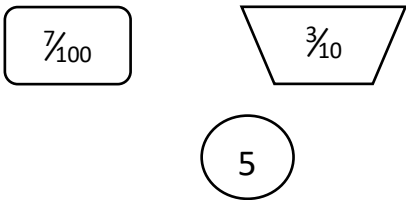
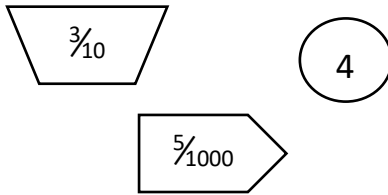
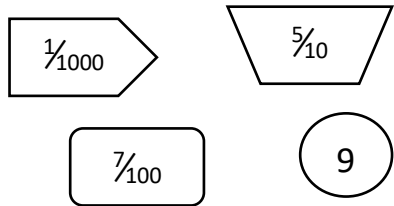
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PLACE VALUE TO 3DP SHEET 3C ANSWERS

1)	2)	3)
		
= 7.249	<u>3.458</u>	<u>2.045</u>

4)	5)	6)
		
<u>0.187</u>	<u>4.26</u>	<u>9.602</u>

7)	8)	9)
		
<u>5.37</u>	<u>4.305</u>	<u>9.571</u>

11) $7 \times 1 + 3 \times \frac{1}{10} + 5 \times \frac{1}{100} + 2 \times \frac{1}{1000}$	= 7.352
12) $9 \times 1 + 1 \times \frac{1}{10} + 8 \times \frac{1}{100}$	= 9.18
13) $7 \times \frac{1}{10} + 6 \times \frac{1}{100} + 4 \times \frac{1}{1000}$	= 0.764
14) $5 \times 1 + 8 \times \frac{1}{100} + 2 \times \frac{1}{1000}$	= 5.082
15) $6 \times \frac{1}{10} + 7 \times \frac{1}{1000}$	= 0.607
16) $8 \times 1 + 5 \times \frac{1}{100} + 9 \times \frac{1}{1000}$	= 8.059
17) $4 \times 1 + 3 \times \frac{1}{10} + 2 \times \frac{1}{100} + 5 \times \frac{1}{1000}$	= 4.325
18) $6 \times 1 + 7 \times \frac{1}{10} + 3 \times \frac{1}{1000}$	= 6.703

COMPARING RATIONAL NUMBERS 6:1 ANSWERS

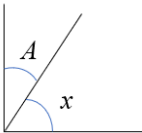
Use the symbols $>$, $<$ and $=$ to compare the numbers.

1)	$ -2 $	$>$	$1\frac{3}{4}$	11)	$ - \frac{1}{2} $	$<$	$\frac{3}{4}$	21)	$ 2.6 $	$<$	$ -3.2 $
2)	$\frac{1}{4}$	$<$	0.5	12)	$ -12 $	$>$	$ -9 $	22)	$ -0.6 $	$<$	$1\frac{1}{4}$
3)	1	$=$	$\frac{3}{3}$	13)	0.37	$<$	0.4	23)	$\frac{3}{2}$	$=$	$ -1\frac{1}{2} $
4)	$ -3.2 $	$>$	$\frac{3}{2}$	14)	$ -0.6 $	$>$	$\frac{1}{2}$	24)	-2.5	$>$	-3
5)	$ -3 $	$<$	$ -5 $	15)	$ - \frac{3}{4} $	$=$	0.75	25)	$ -0.65 $	$<$	$ -0.8 $
6)	$3\frac{1}{4}$	$<$	$ -4 $	16)	$- \frac{3}{2}$	$>$	-2.4	26)	$- \frac{1}{4}$	$>$	$- \frac{1}{2}$
7)	$ -7 $	$>$	$6\frac{3}{4}$	17)	-0.75	$<$	-0.6	27)	$ - \frac{1}{3} $	$>$	$ - \frac{1}{5} $
8)	-5	$<$	$3\frac{1}{2}$	18)	$ -0.38 $	$<$	$ -0.5 $	28)	$\frac{6}{2}$	$=$	$ -3 $
9)	1.5	$=$	$1\frac{1}{2}$	19)	$ - \frac{1}{2} $	$>$	0.27	29)	$ -0.62 $	$>$	-0.8
10)	$ -2.6 $	$<$	3	20)	-0.8	$=$	$- \frac{8}{10}$	30)	$ -0.06 $	$<$	$ -0.1 $

Compare these amounts.

31)	$ 3 - 5 $	$<$	2^2
32)	$ - \frac{3}{4} $	$=$	$1 - \frac{1}{4}$
33)	$\frac{3}{8} + \frac{5}{8}$	$=$	$ 6 - 7 $
34)	1.5	$<$	$ 2 - 4 $
35)	2×0.8	$>$	$\frac{1}{2} \times 3$
36)	$ 2 - 7 $	$<$	$ -2 \times 3$
37)	$ 4 - 11 $	$>$	$ -5 \times -1 $
38)	$\frac{1}{4} \times 2$	$=$	$1 \div 2$
39)	$\frac{1}{8} + \frac{3}{8}$	$<$	$1 - \frac{3}{8}$
40)	$ 5 - 16 $	$>$	3^2

MENTAL MATH QUIZ 6:4 ANSWERS

1)	What is 5% of \$1200?	\$60
2)	What is the value of the expression $3(2 + 4a)$ when $a = 7$?	90
3)	$2\frac{1}{3} \times \frac{5}{7}$	$\frac{5}{3}$
4)	Write $\frac{3}{5}$ as a decimal.	0.6
5)	Write an algebraic expression for the value of the missing angle A in terms of x . 	$A = 90 - x^\circ$
6)	Write 56 as a product of prime factors.	$2 \times 2 \times 2 \times 7$ or $2^3 \times 7$
7)	Solve this equation for p: $112 + p = 178$	$p = 66$
8)	Work out $2^3 \cdot 3 \cdot 5$	120
9)	Write down all the positive integer values of d that are solutions for this inequality: $d + 5 \leq 9$	$d = 1, 2, 3$ or 4
10)	What is the perimeter of a regular hexagon with sides 8 inches?	$8 \times 6 = 48$ in.
11)	In a bag, there are some white balls and red balls. The ratio of white balls to red balls is 3:5. What proportion of the balls in the bag are red?	$\frac{3}{8}$
12)	Tyger travels 57 miles in 90 minutes. What is his average speed in miles per hour? 	38 mph
13)	A square has an area of 121 square feet. What is the length of each side?	11 feet
14)	How many cups in $2\frac{1}{2}$ gallons?	40 cups
15)	What decimal is equivalent to 24%?	0.24
16)	A book has 379 pages. I read n pages. Write an expression to show how many pages I still need to read to finish the book.	$379 - n$
17)	Work out $\frac{7}{3} - \frac{4}{5}$. Give your answer as an improper fraction.	$\frac{23}{15}$
18)	Put these in order, smallest first: -7 2 5 -1	<u>-1</u> <u>2</u> <u>5</u> <u>-7</u>

ORDER OF OPERATIONS 6.1 ANSWERS

Work out the value of the expressions and circle the correct answer: A, B or C.

			A	B	C
1)	$14 - 2 \times 5$	$= 14 - 10 = 4$	(4)	60	24
2)	$3 \times 4 - 2 \times 5$	$= 12 - 10 = 2$	30	(2)	50
3)	$2 + 3 \times 4 + 5$	$= 2 + 12 + 5 = 19$	25	(19)	29
4)	$24 - 7 \times 3 + 1$	$= 24 - 21 + 1 = 4$	(4)	3	52
5)	$20 \div 2 + 3$	$= 10 + 3 = 13$	4	9	(13)
6)	$15 + 4 \times 10 - 5$	$= 15 + 40 - 5 = 50$	185	(50)	35
7)	$10 - 7 + 3 \times 2$	$= 10 - 7 + 6 = 9$	(9)	12	-10
8)	$2 + 9 \div 3 + 6$	$= 2 + 3 + 6 = 11$	3	10	(11)
9)	$20 - 3 \times 4 \div 2$	$= 20 - 12 \div 2 = 20 - 6 = 14$	(14)	34	4
10)	$30 \div 5 \times 3 + 6$	$= 6 \times 3 + 6 = 18 + 6 = 24$	8	54	(24)
11)	$3 \times (9 - 5) + 6$	$= 3 \times 4 + 6 = 12 + 6 = 18$	28	(18)	30
12)	$4 \times (6 - 3) \times 5$	$= 4 \times (3) \times 5 = 12 \times 5 = 60$	9	110	(60)
13)	$12 - (3 + 4 \times 2)$	$= 12 - (3 + 8) = 12 - 11 = 1$	(1)	-2	17
14)	$(7 + 3) \times (12 - 5)$	$= (10) \times (7) = 70$	28	(70)	38
15)	$18 + 12 \div (15 - 11)$	$= 18 + 12 \div (4) = 18 + 3 = 21$	(21)	-9	$7 \frac{1}{2}$
16)	$\frac{1}{2} \times (4 + 5 - 3)$	$= \frac{1}{2} \times (9 - 3) = \frac{1}{2} \times 6 = 3$	4	(3)	$6 \frac{1}{2}$
17)	$4 \times 5 - 12 \div 2$	$= 20 - 6 = 14$	-14	4	(14)
18)	$8 + 20 \div 4 + 6$	$= 8 + 5 + 6 = 19$	10	13	(19)
19)	$3 \times (12 - 5 \times 2)$	$= 3 \times (12 - 10) = 3 \times 2 = 6$	(6)	62	42
20)	$(30 - 12) \div (9 - 3)$	$= (18) \div (6) = 3$	-1	(3)	28

QUADRA'S SQUARE PUZZLE 6A ANSWERS

Please note that there are several solutions for each square puzzle. The other solutions will be reflections of these solutions with the numbers on opposite sides.

One solution for each puzzle is given.

1)

-4 -3 -2 -1 1 2 3

Total must be 0

2	-3	1
0		-4
-2	-1	3

2)

-4 -3 -2 -1 1 2 3

Total must be -3

1	0	-4
-1		3
-3	2	-2

ABSOLUTE VALUES ARITHMETIC 1 ANSWERS

Work out the answers to these equations involving absolute values.

1)	$ 3 + -2 = 5$	16)	$ 2 - 7 + 3 = 2$
2)	$ 7 - 4 = 3$	17)	$ 5 - 12 + 4 = 3$
3)	$ -3 + -5 = 8$	18)	$ -5 \times -2 = 10$
4)	$ -7 - 6 = 1$	19)	$2 \times 7 - 4 = 6$
5)	$ 4 \times 2 = 8$	20)	$ 5 - 9 \times 2 = 8$
6)	$ 3 \times -5 = 15$	21)	$ -6 - -3 = 3$
7)	$ 8 - -6 = 2$	22)	$ -2 + -7 = 9$
8)	$ -7 - -5 = 2$	23)	$ 3 - -9 = -6$
9)	$ -6 \times -3 = 18$	24)	$ 4 - 5 - 3 = 4$
10)	$ 6 + 5 = 11$	25)	$ -4 + 6 = 2$
11)	$ 3 - 4 = 1$	26)	$ 5 - 15 + 3 = 7$
12)	$ 7 \times 2 = 14$	27)	$4 \times 3 - 7 = 16$
13)	$ 2 - 6 = 4$	28)	$ 11 - 2 \div 3 = 3$
14)	$ 5 + 3 - 7 = 1$	29)	$ 3 - 15 \div 4 = 3$
15)	$ 2 - 5 + 4 = 1$	30)	$ 3 - 8 \times 4 - 7 = 15$

CHALLENGE: Put the values of these expressions in order, from smallest to largest.

$ 4 + 3 - 5 $	$ -7 + -3 $	$ -3 - 4 $	$ -8 - -3 $	$ 2 - 8 + 3 $
$ 4 + 3 - 5 = 2$	$ 2 - 8 + 3 = 3$	$ -8 - -3 = 5$	$ -3 - 4 = 7$	$ -7 + -3 = 10$
Smallest				Largest

MEAN, MEDIAN, MODE AND RANGE SHEET 1 ANSWERS

Example {15, 23, 19, 20, 23}		4) {22, 37, 19, 25, 37, 51, 82}	
order {15, 19, 20, 23, 23}		order {19, 22, 25, 37, 37, 51, 82}	
Mean $100 \div 5 = \underline{20}$	Median <u>20</u>	Mean <u>39</u>	Median <u>37</u>
Mode <u>23</u>	Range $23 - 15 = \underline{8}$	Mode <u>37</u>	Range <u>63</u>
1) {2, 7, 4, 2, 3, 6, 11}		5) {6, 2, 13, 7, 6, 11, 10, 6, 2}	
order {2, 2, 3, 4, 6, 7, 11}		order {2, 2, 6, 6, 6, 7, 10, 11, 13}	
Mean <u>5</u>	Median <u>4</u>	Mean <u>7</u>	Median <u>6</u>
Mode <u>2</u>	Range <u>9</u>	Mode <u>6</u>	Range <u>11</u>
2) {70, 63, 67, 62, 63}		6) {109, 104, 96, 103, 104, 107, 98}	
order {62, 63, 63, 67, 70}		order {96, 98, 103, 104, 104, 107, 109}	
Mean <u>65</u>	Median <u>63</u>	Mean <u>103</u>	Median <u>104</u>
Mode <u>63</u>	Range <u>8</u>	Mode <u>104</u>	Range <u>13</u>
3) {11, 4, 7, 8, 2, 6, 4}		7) {14, 68, 38, 65, 36, 57, 65}	
order {2, 4, 4, 6, 7, 8, 11}		order {14, 36, 38, 57, 65, 65, 68}	
Mean <u>6</u>	Median <u>6</u>	Mean <u>49</u>	Median <u>57</u>
Mode <u>4</u>	Range <u>9</u>	Mode <u>65</u>	Range <u>54</u>

BASIC MONEY PERCENTAGES SHEET 1 ANSWERS

A) 50% and 100%

- | | | |
|---------------------------------|--------------------------------|--------------------------------|
| 1) 50% of \$12 = \$6 | 2) 50% of \$20 = \$10 | 3) 100% of \$35 = \$35 |
| 4) 50% of \$32 = \$16 | 5) 100% of \$65 = \$65 | 6) 50% of \$28 = \$14 |
| 7) 100% of 17 = \$17 | 8) 50% of \$5 = \$2.50 | 9) 50% of \$700 = \$350 |
| 10) 50% of \$11 = \$5.50 | 11) 100% of \$94 = \$94 | 12) 50% of \$56 = \$28 |

B) 1% and 10%

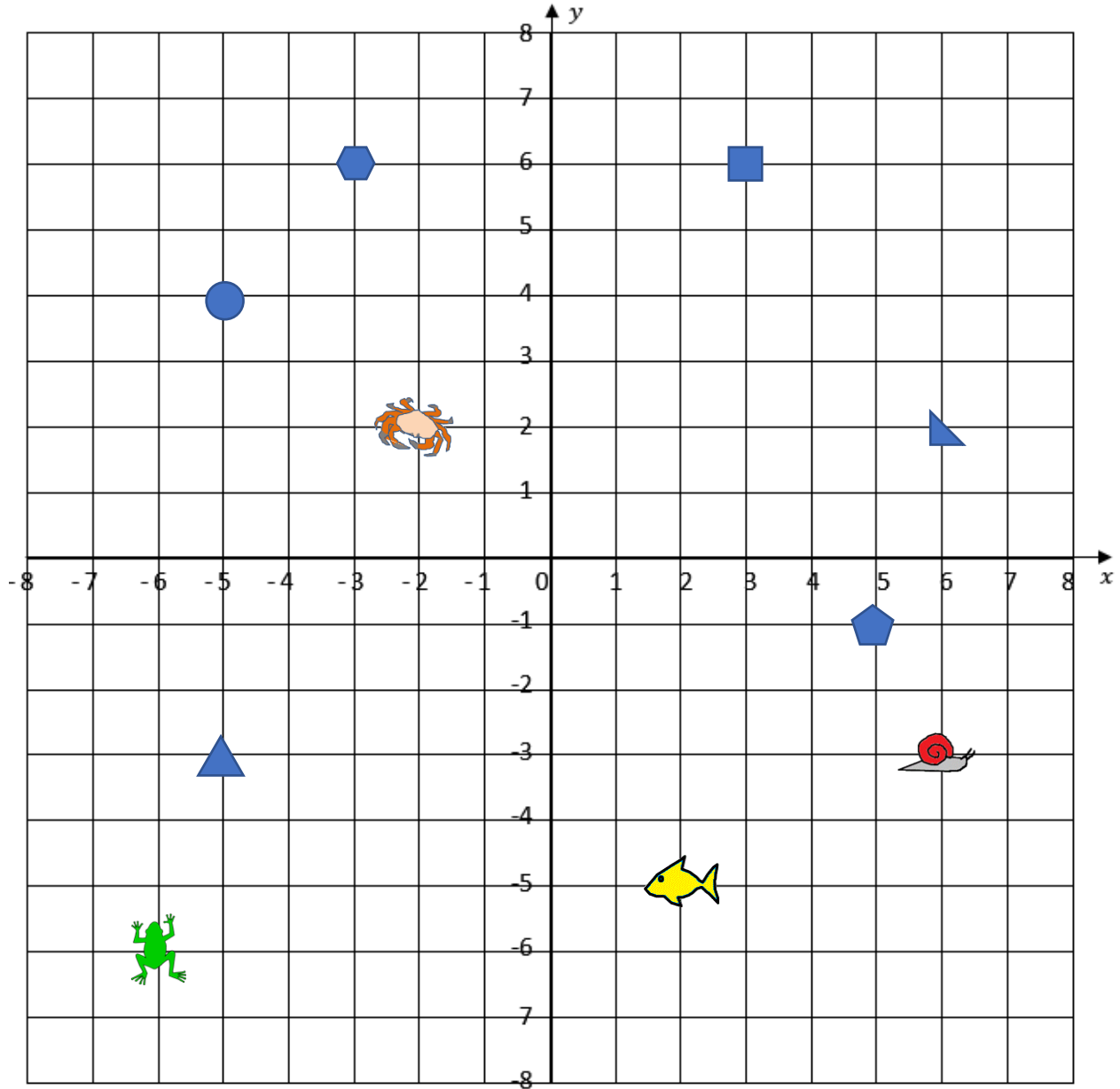
- | | | |
|---------------------------------|---------------------------------|--------------------------------|
| 1) 10% of \$4 = 40¢ | 2) 10% of \$30 = \$3 | 3) 1% of \$8 = 8¢ |
| 4) 10% of \$60 = \$6 | 5) 1% of \$800 = \$8 | 6) 10% of \$12 = \$1.20 |
| 7) 10% of \$9 = 90¢ | 8) 1% of \$14 = 14¢ | 9) 1% of \$38 = 38¢ |
| 10) 10% of \$16 = \$1.60 | 11) 10% of \$18 = \$1.80 | 12) 1% of \$1500 = \$15 |

C) 1%, 10%, 50% and 100%

- | | | |
|---------------------------------|---------------------------------|--------------------------------|
| 1) 50% of \$18 = \$9 | 2) 1% of \$300 = \$3 | 3) 10% of \$12 = \$1.20 |
| 4) 100% of \$30 = \$30 | 5) 10% of \$140 = \$14 | 6) 50% of \$90 = \$45 |
| 7) 1% of \$9 = 9¢ | 8) 50% of \$58 = \$29 | 9) 10% of \$180 = \$18 |
| 10) 10% of \$620 = \$62 | 11) 1% of \$2800 = \$28 | 12) 100% of \$72 = \$72 |
| 13) 50% of \$420 = \$210 | 14) 1% of \$17 = 17¢ | 15) 10% of \$8 = 80¢ |
| 16) 1% of \$1300 = \$13 | 17) 50% of \$320 = \$160 | 18) 10% of \$690 = \$69 |

FIND THE COORDINATES 1 ANSWERS

Use the coordinate grid to work out the coordinates below.



- | | |
|----------------------------|------------------------------------|
| 1) Circle $(-5, 4)$ | 2) Square $(3, 6)$ |
| 3) Hexagon $(-3, 6)$ | 4) Frog $(-6, -6)$ |
| 5) Fish $(2, -5)$ | 6) Pentagon $(5, -1)$ |
| 7) Right triangle $(6, 2)$ | 8) Equilateral triangle $(-5, -3)$ |
| 9) Crab $(-2, 2)$ | 10) Snail $(6, -3)$ |

FRACTION DECIMAL PERCENT RIDDLES 1

ANSWERS

CHALLENGE A

- I am more than a half.
- I am less than nine-tenths.
- If you write me as a decimal, I have two decimal places.

Who am I? Answer F) $79/100$

A $1/4$	B 60%	C 0.9
D 35%	E 0.2	F $79/100$

CHALLENGE B

- I am less than $3/4$.
- I am not a fraction.
- I am more than 25%.
- If you round me to the nearest whole, then I round up to 1.

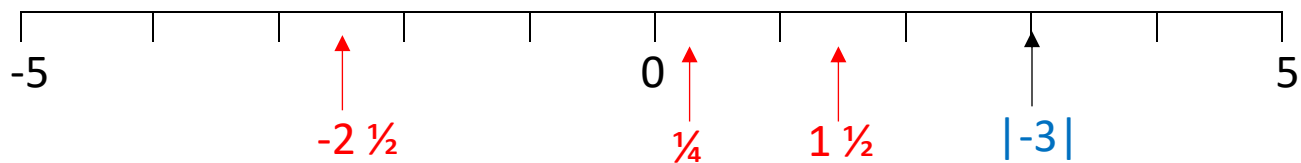
Who am I? Answer B) 60%



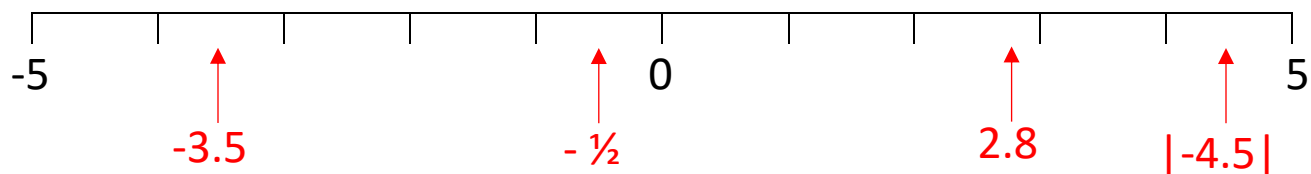
POSITIONING RATIONAL NUMBERS 6:1 ANSWERS

Position the numbers in the correct place on the number lines below.

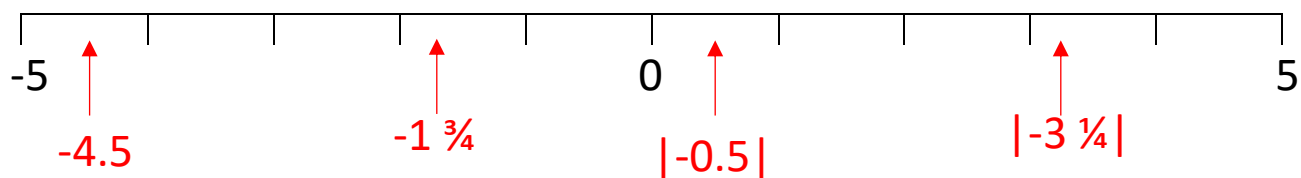
A)	$ -3 $	$\frac{1}{4}$	$1\frac{1}{2}$	$-2\frac{1}{2}$
-----------	--------	---------------	----------------	-----------------



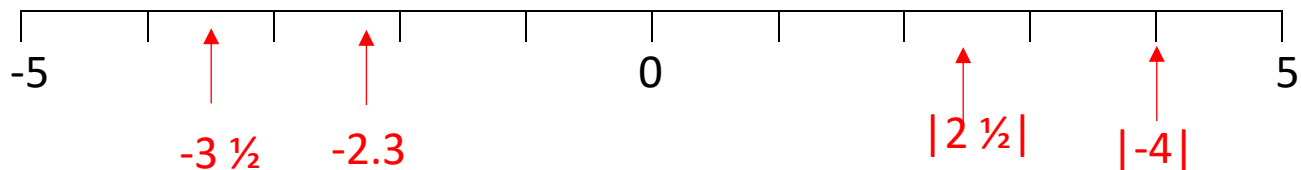
B)	$ -4.5 $	2.8	$-\frac{1}{2}$	-3.5
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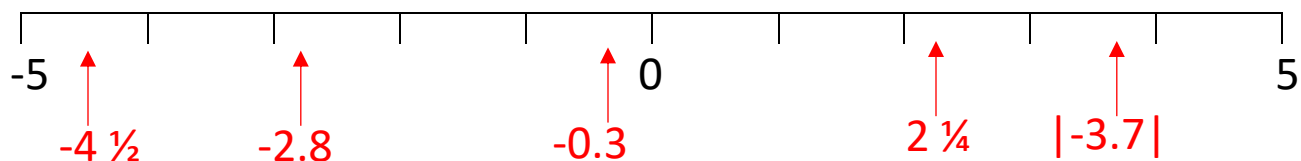
C)	$ -0.5 $	-4.5	$ -3\frac{1}{4} $	$-1\frac{3}{4}$
-----------	----------	------	-------------------	-----------------



D)	$ 2\frac{1}{2} $	$-3\frac{1}{2}$	-2.3	$ -4 $
-----------	------------------	-----------------	------	--------



E)	$2\frac{1}{4}$	$-4\frac{1}{2}$	-2.8	$ -3.7 $	-0.3
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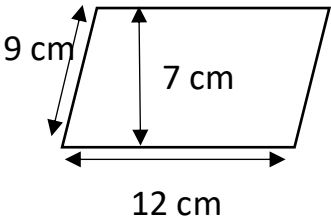
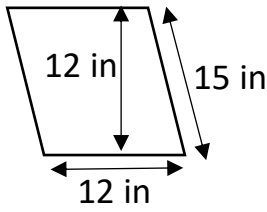
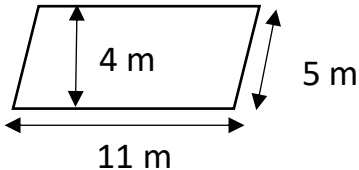
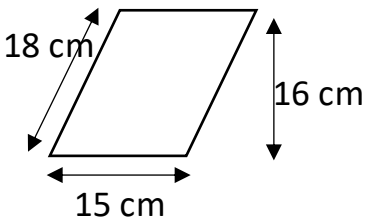
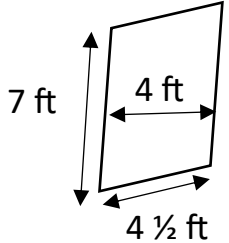
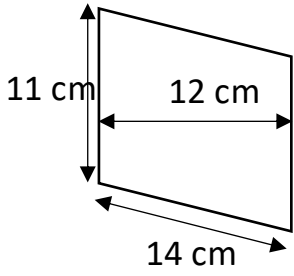


NEWTON'S NUMBER TRACK PUZZLE 6A ANSWERS

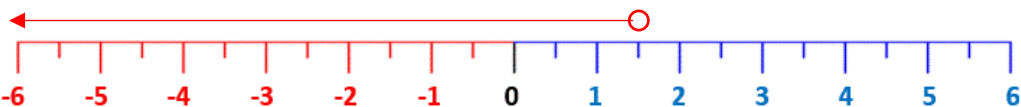
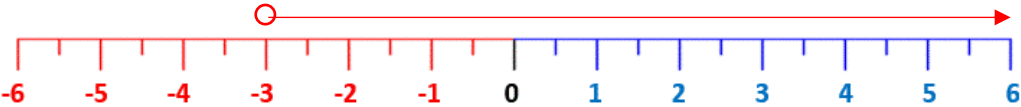
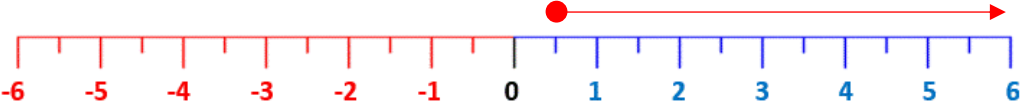
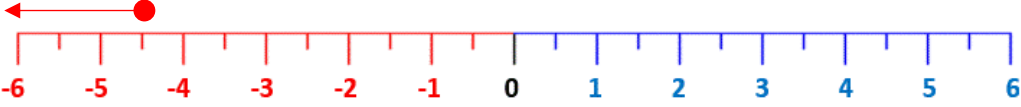
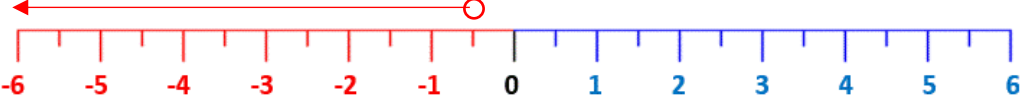
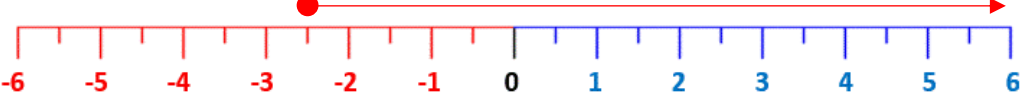
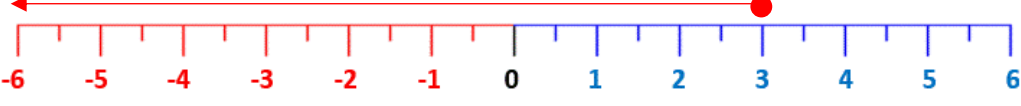
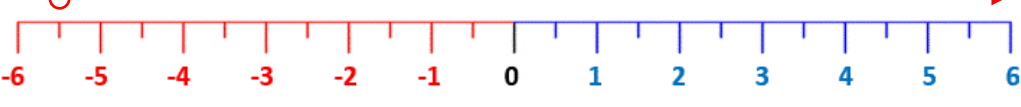
1)	15	16	31	47	78
2)	0.7	0.4	1.1	1.5	2.6
3)	5	-2	3	1	4
4)	0.4	0.8	1.2	2	3.2
5)	8	-5	3	-2	1
6)	3	-4	-1	-5	-6
7)	1.3	2.4	3.7	6.1	9.8
8)	0.5	0.6	1.1	1.7	2.8
9)	-3	4	1	5	6
10)	7	-5	2	-3	-1
11)	0.8	1.3	2.1	3.4	5.5
12)	-6	1	-5	-4	-9
13)	3	-6	-3	-9	-12
14)	0.7	1.2	1.9	3.1	5

AREA AND PERIMETER OF A PARALLELOGRAM 1 ANSWERS

Use the base and height measurement to find the area of these parallelograms.

	WORKING OUT	ANSWER
1) 	Area = base x height $= 12 \times 7 = 84 \text{ cm}^2$ Perimeter = $9 \times 2 + 12 \times 2 = 18 + 24 = 42 \text{ cm}$	Area 84 cm^2 Perimeter 42 cm
2) 	Area = base x height $= 12 \times 12 = 144 \text{ in}^2$ Perimeter = $12 \times 2 + 15 \times 2 = 24 + 30 = 54 \text{ in}$	Area 84 cm^2 Perimeter 42 cm
3) 	Area = base x height $= 11 \times 4 = 44 \text{ m}^2$ Perimeter = $11 \times 2 + 5 \times 2 = 22 + 10 = 32 \text{ m}$	Area 44 m^2 Perimeter 32 m
4) 	Area = base x height $= 15 \times 16 = 240 \text{ cm}^2$ Perimeter = $15 \times 2 + 18 \times 2 = 30 + 36 = 66 \text{ cm}$	Area 240 cm^2 Perimeter 66 cm
5) 	This parallelogram is tilted 90° Area = base x height $= 7 \times 4 = 28 \text{ ft}^2$ Perimeter = $7 \times 2 + 4 \frac{1}{2} \times 2 = 14 + 9 = 23 \text{ ft}$	Area 28 ft^2 Perimeter 23 ft
6) 	This parallelogram is also tilted 90° Area = base x height $= 11 \times 12 = 132 \text{ cm}^2$ Perimeter = $11 \times 2 + 14 \times 2 = 22 + 28 = 50 \text{ cm}$	Area 132 cm^2 Perimeter 50 cm

INEQUALITIES ON A NUMBER LINE 2 ANSWERS

	NUMBER LINE	INEQUALITY
1)		$x < 1\frac{1}{2}$
2)		$x > -3$
3)		$x \geq 0.5$
4)		$x \leq -4.5$
5)		$x < -0.5$
6)		$x \geq -2\frac{1}{2}$
7)		$x \leq 3$
8)		$x > -5\frac{1}{2}$

MULTIPLYING AND DIVIDING FRACTIONS 1 ANSWERS

$$1) \quad \frac{3}{5} \times \frac{3}{4} = \frac{9}{20}$$

$$2) \quad \frac{2}{3} \div \frac{1}{2} = \frac{4}{3}$$

$$3) \quad \frac{3}{4} \times \frac{1}{5} = \frac{3}{20}$$

$$4) \quad \frac{1}{3} \div \frac{2}{5} = \frac{5}{6}$$

$$5) \quad \frac{3}{5} \times \frac{1}{4} = \frac{3}{20}$$

$$6) \quad \frac{5}{6} \div \frac{2}{5} = \frac{25}{12}$$

$$7) \quad \frac{3}{7} \times \frac{4}{5} = \frac{12}{35}$$

$$8) \quad \frac{1}{8} \div \frac{2}{3} = \frac{3}{16}$$

$$9) \quad \frac{5}{6} \times \frac{1}{2} = \frac{5}{12}$$

$$10) \quad \frac{4}{5} \div \frac{3}{8} = \frac{32}{15}$$

$$11) \quad \frac{4}{9} \times \frac{2}{5} = \frac{8}{45}$$

$$12) \quad \frac{3}{8} \div \frac{2}{7} = \frac{21}{16}$$

$$13) \quad \frac{1}{5} \times \frac{4}{5} = \frac{4}{25}$$

$$14) \quad \frac{3}{5} \div \frac{1}{2} = \frac{6}{5}$$

$$15) \quad \frac{2}{7} \times \frac{1}{3} = \frac{2}{21}$$

$$16) \quad \frac{4}{7} \div \frac{1}{5} = \frac{20}{7}$$

$$17) \quad \frac{2}{5} \times \frac{3}{7} = \frac{6}{35}$$

$$18) \quad \frac{2}{9} \div \frac{1}{4} = \frac{8}{9}$$

$$19) \quad \frac{1}{8} \times \frac{3}{5} = \frac{3}{40}$$

$$20) \quad \frac{3}{7} \div \frac{1}{4} = \frac{12}{7}$$

$$21) \quad \frac{3}{10} \times \frac{3}{5} = \frac{9}{50}$$

$$22) \quad \frac{2}{3} \div \frac{5}{8} = \frac{16}{15}$$

$$23) \quad \frac{7}{8} \times \frac{5}{6} = \frac{35}{48}$$

$$24) \quad \frac{5}{9} \div \frac{4}{7} = \frac{35}{36}$$