WS SOLUTION

17 Evaluate.

a) $(+9) \times (+10) = (+90)$ **b)** $(+6) \times (-11) = (-66)$ **c)** $(+96) \div (-16) = (-6)$

d) $(+39) \div (+3) = (+13)$ **e)** $(-8) \times (+6) = (-48)$ **f)** $(-36) \div (+9) = (-4)$

g) $(-44) \div (-4) = (+11)$ **h)** $(-5) \times (-1) = (+5)$

18) Find the missing term

a) (+60) ÷ (-6) = (-10)

b) (+44) ÷ (-11) = (-4)

c) (+24) ÷ (-4) = (-6)

c) (+48) ÷ (+12) = (+4)

d) (+14) x (-2) = (-28)

e) (-15) x (-7) = (+105)

f) (+50) ÷ (-10) = (-5)

g) (-18) x (-4) = (+72)

h) (-54) ÷ (-6) = (+9)

i) (__) ÷ (-12) = (+96)

(-1152)

Quiz & Worksheet - Formula for Independent Events in Probability

WS SOLUTION

WS

1. A bag contains 6 red, 2 yellow, and 7 orange marbles. What is the probability of drawing two red marbles out of the bag (with replacement)?

- 2/5
- 3/5
- 4/25
- 1/7

P(Red) × P(Red)

$\frac{6}{15} \times \frac{6}{15}$

$\frac{2}{5} \times \frac{2}{5}$

$\frac{4}{25}$

2. A jar contains 4 yellow, 3 blue, 5 orange, and 8 black balls. What is the probability of reaching into the jar and pulling out a blue and an orange ball (with replacement)?

- 3/80
- 1/5
- 3/76
- None of the answers are correct.

P(Blue) × P(orange)

$\frac{3}{20} \times \frac{5}{20}$

$\frac{15}{400}$

$\frac{3}{80}$

OR

$\frac{3}{20} \times \frac{5}{20}$

$\frac{3}{20} \times \frac{1}{4}$

$\frac{3}{80}$

3. What is the probability of the following compound event involving a coin and a standard die?

P (Heads , Odd #)

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

P(Heads) × P(odd on Die)

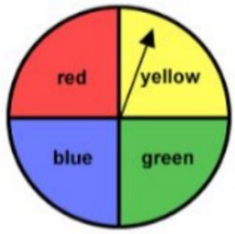
$\frac{1}{2} \times \frac{3}{6}$

$\frac{1}{2} \times \frac{1}{2}$

$\frac{1}{4}$

WS SOLUTION

WS

1. 

Ricardo has the spinner pictured here and a bag of marbles filled with 2 red marbles, 3 green marbles, and 3 blue marbles. What is the probability that Ricardo spins red on the spinner and picks a red marble out of the bag?

P(Red spinner) × P(Red marble)

$\frac{1}{4} \times \frac{2}{8}$ Reduce

$\frac{1}{4} \times \frac{1}{4}$

$\frac{1}{16}$

A 1/2

B 1/8

C 1/4

D 1/16

2. How many outcomes are there with tossing a coin and rolling a dice?

Coin ⇒ 2 outcomes

Die ⇒ 6 outcomes

A 2

B 24

C 6

D 12

Total ⇒ 2×6 = 12

3. 

What is the probability of picking a blue marble, putting it back in the bag, then picking a red marble?

P(Blue) × P(Red)

$\frac{4}{7} \times \frac{3}{7} = \frac{12}{49}$

A $\frac{3}{7} \times \frac{3}{7}$

B $\frac{4}{7} \times \frac{3}{6}$

C $\frac{4}{7} \times \frac{3}{7}$

D $\frac{4}{7} \times \frac{4}{7}$

4. 

If you spin two times, what is the probability of landing on green both times?

P(Green) × P(Green)

$\frac{1}{6} \times \frac{1}{6}$

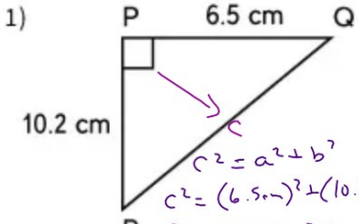
$\frac{1}{36}$

Name: _____ Date: _____

MATH MONKS

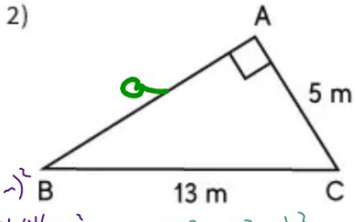
Pythagoras' Theorem Worksheet
WS SOLUTION

Find the lengths of the unknown sides in the given right triangles.

1) 

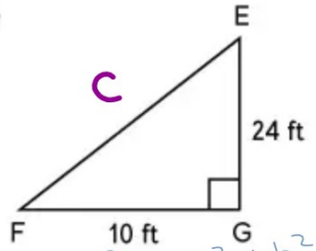
$c^2 = a^2 + b^2$
$c^2 = (6.5cm)^2 + (10.2cm)^2$
$c^2 = 42.25cm^2 + 104.04cm^2$
$c^2 = 146.29cm^2$
$\sqrt{c^2} = \sqrt{146.29cm^2}$
$c \approx 12.1cm$

QR = 12.1cm

2) 

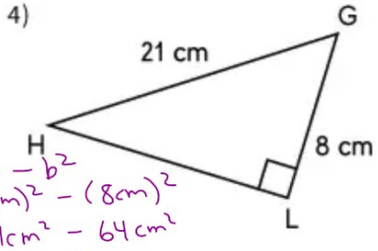
$a^2 = c^2 - b^2$
$a^2 = (13m)^2 - (5m)^2$
$a^2 = 169m^2 - 25m^2$
$a^2 = 144m^2$
$\sqrt{a^2} = \sqrt{144m^2}$

a ⇒ AB = 12m

3) 

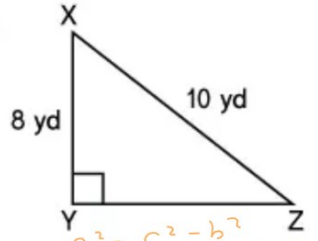
$c^2 = a^2 + b^2$
$c^2 = (10ft)^2 + (24ft)^2$
$c^2 = 100ft^2 + 576ft^2$
$c^2 = 676ft^2$
$\sqrt{c^2} = \sqrt{676ft^2}$

c = EF = 26ft

4) 

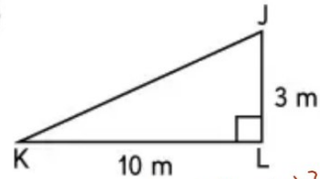
$a^2 = c^2 - b^2$
$a^2 = (21cm)^2 - (8cm)^2$
$a^2 = 441cm^2 - 64cm^2$
$a^2 = 377cm^2$
$\sqrt{a^2} = \sqrt{377cm^2}$
$a \approx 19.4cm$

HL = 19.4cm

5) 

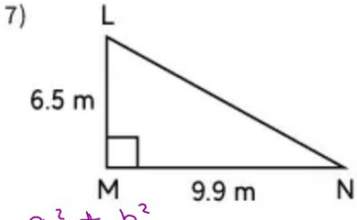
$a^2 = c^2 - b^2$
$a^2 = (10yd)^2 - (8yd)^2$
$a^2 = 100yd^2 - 64yd^2$
$a^2 = 36yd^2$
$\sqrt{a^2} = \sqrt{36yd^2}$
$a = 6yd$

YZ = 6yd

6) 

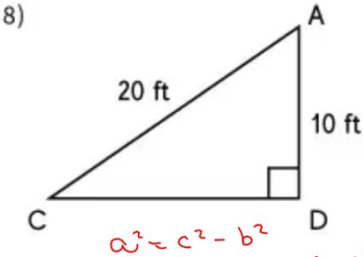
$c^2 = a^2 + b^2$
$c^2 = (10m)^2 + (3m)^2$
$c^2 = 100m^2 + 9m^2$
$c^2 = 109m^2$
$\sqrt{c^2} = \sqrt{109m^2}$
$c = 10.4m$

KJ = 10.4m

7) 

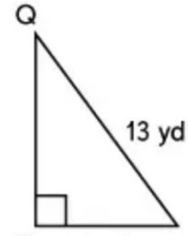
$c^2 = a^2 + b^2$
$c^2 = (6.5m)^2 + (9.9m)^2$
$c^2 = 42.25m^2 + 98.01m^2$
$c^2 = 140.26m^2$
$\sqrt{c^2} = \sqrt{140.26m^2}$

c ⇒ LN = 11.8m

8) 

$a^2 = c^2 - b^2$
$a^2 = (20ft)^2 - (10ft)^2$
$a^2 = 400ft^2 - 100ft^2$
$a^2 = 300ft^2$
$\sqrt{a^2} = \sqrt{300ft^2}$

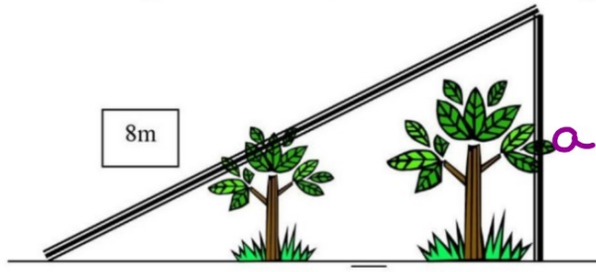
a ⇒ CD = 17.3ft

9) 

$a^2 = c^2 - b^2$
$a^2 = (13yd)^2 - (4yd)^2$
$a^2 = 169yd^2 - 16yd^2$
$a^2 = 153yd^2$
$a = \sqrt{153yd^2}$

a ⇒ QR = 12.4 yd

Q3) A ladder if 8 metres long . It leans against a wall with one end on the ground 6 metre from the wall. The other end just reaches a windowsill. Calculate the height of the windowsill above the ground.



Page 1

WS SOLUTION

$a^2 = c^2 - b^2$

$a^2 = (8\,m)^2 - (6\,m)^2$

$a^2 = 64m^2 - 36m^2$

$a^2 = 28m^2$

$\sqrt{a^2} = \sqrt{28m^2}$

$a \approx 5.3\,m$

Determine whether each set of numbers is a Pythagorean triple.

1) 6, 8, 10

$6^2 + 8^2$ $\quad 10^2$

$36 + 64$ $\quad 100$

100

same

Yes

2) 16, 7, 3

16^2 $\quad 7^2 + 3^2$

256 $\quad 49 + 9$

58

Not same

Not A triple

3) 32, 21, 26

32^2 $\quad 21^2 + 26^2$

1024 $\quad 441 + 646$

1117

NOT same

Not A triple

4) 20, 25, 15

25^2 $\quad 20^2 + 15^2$

625 $\quad 400 + 225$

625

Same

So Yes a triple